

18836

le
Pur
Co

B. RUHL'S
BOOKBINDERY.
8th. bet. J & K.
SACRAMENTO.

VOLUME *23*

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,
vs.
The Gold Run Ditch and Mining Co. }

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S.
BELCHER, A. L. RHODES, RICHARD BAYNE.

For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B.
DIBBLE, A. P. CATLIN.

Index

Hobson, John B.	Direct resumed	6457
	Cross	6480
	Cross resumed	6588
	Redirect	6619
	Re Cross	6641
Noyes, H. L.	Direct Recalled -	6657
	Cross	6659
Healen, Albert	Direct	6674
	Cross	6727

Saturday, Dec. 17, 1881.	Morning.	6456
do.	Afternoon	6587

In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California	} Morning Session Saturday Dec. 17 1881
vs. The Gold Run Ditch and Mining Company	

Transcript of Testimony
Volume

Index

John B. Hobson direct resumed 6413

Winifred J. Davis
Official Reporter

In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California vs.	} Morning Session Saturday Dec. 17 th 1881
The Gold Run Ditch and Mining Company	

Testimony
of
John D. Hobson
direct resumed

Mr. Byrne Since you went to the
Sawyer Hill district in 1878 how
many acres of mining ground have
been washed into Indian Canon?

A I state that I could not
answer that question

Q How many cuts the North Fork
of the American River above
Pecor Bridge? A 3,585,800
Cubic yard.

Q How many acres did you

State that was^r a 31 acres

Q In your mining operation on Iowa Hill during the three seasons you spoke of yesterday how much water did you use?

A 278 days water

Q During the 3 seasons?

A Yes sir

Q And how many inches of water per day? A 500 inches through the nozzle

Q How much ground did you wash off; how many acres I mean, you need not give it in yards? A 20 acres

Q How much gold did that produce

A \$66,427.19

Q How much net profit was derived? A The cost of mining was \$35,450.-

Q Well, have you before you the amount of the net profit

A The net profit was \$30,977.19

Q Have you made any estimate of the amount of gold produced in the Iowa Hill district?

A I have made some estimate of that, from some of the mines

Q Will you state to the Court what the result of your Examination has been?

A It is only a partial Estimate

Q State it so far as it extends? A From the North Star & Weiser Claims at Iowa Hill, \$2,000,000 The Bolvenne mine at Rock Hill \$800,000. The Shelby \$100,000; the Dayton \$150,000; the Columbus \$100,000 the Phillips \$80,000; the Mining Star mine at Mining Star Hill, \$250,000; the Birds Flat mine \$200,000; Strawberry Flat \$100,000; Corscun Hill \$500,000; the Grizzly Flat mine \$300,000; the Jucker Flat \$250,000

Mr. Cadwalader When is Grizzly flat? A. Grizzly flat is a Claim which is one of the tributaries of Shorttail Claim it is on the South slope of Iowa Hill Ridge. Total from the workings of the Independence Hill mine \$100,000; Mountain Gate mine \$1,500,000

The Mountain Gate mine at
Damascus - Total \$6541.000
Mr. Rymer. Did you mention
the Sucker flat mine?

A Yes sir, those are all the
mines that I can come get
any thing like reliable data
from

Q Within what time can they
amount of gold produced?

A Since 1857

Q Do you know the present
production of the Mountain
Gate mine per acre?

A Yes sir

I state if you please?

A The yield varies from \$3.-
to 5³⁰ per load

Q Give it by the acre if
you know? A About \$4000.

Q That is the present pro-
duction?

A Yes sir

I have many of these mines
are in that district from
which you have obtained any
statistics in regard to production.

A There is another mine
that I know what it is

producing at present. the
Whiskey Hill mine.

I state the approximate num-
ber of mines as nearly as
you can from which you have
not obtained statistics?

A Well, there must be a-
bout forty
or thereabouts. In what district
is that? A In the Doory
Hill district

Mr Dymer. Did you just
now say there was another
mine from which you do d
have statistics? A Yes sir

I will you state what mine
that is and how much pro-
duced? A The last wash-
ing that was made at the
mine yielded 3 ounces to 25
superficial feet

I What one is that?

A The Whiskey Hill mine

I Do you know the entire
production? A No sir, I
do not - I know it since
I have been interested, that
is all.

2 Have you ever been engaged in farming in this country?
 A Yes sir

2 Where? A On my place about $3\frac{1}{2}$ miles East of Auburn, the same place where the mining operations were carried on, that I testified to

2 In conducting your farming operations did you use any water for irrigation?
 A Yes sir

2 Where did you get that water?
 A The Bear River ditch
 2 What was the character of that water as to being muddy or clean?
 A It carries quite a percent.

age of silt

2 Of sediment?

A Silt and Sediment both

2 Describe to the Court how muddy that water is or was at the time you used it?

A I have never made any test as to the percentage of mud or sediment carried by

Chat water.

Q Can you give the Court
such an idea as will enable
him to understand about how
muddy it is — it is very
muddy? A It is about
as muddy as the American
River was after the last rain,
that is the last heavy rain,
the freshest here when the river
raised, I forget the date now.

Q When does that water
come from? A It comes
from Bear River.

Q What caused it to be muddy?

A I suppose the mud comes
from the washings of the Gold
Run mine.

Q What mine? A The
Dutch Flat Mine. I should say
I do it more or less muddy
than the water of the American
River usually are.

Q It is more muddy than
I have ever seen the American
River.

Q What effect does that
have upon the production of

The soil which is irrigated
with it? A It is considered
a fertilizer in the foothills.

I have that been your experience?
A Yes sir.

I state to what extent you
have used it and how you know
that? A I used a reservoir
bottom, an old reservoir bottom
that was filled with that sed-
iment to a depth varying from
one to ten feet. I cut the
dam and drained it and let
it stand one year and cul-
tivate it and used it for
a garden patch.

I well, state what the
result was? A Well,
I raised all kind of vegetables
on it.

I own it good land or was it
bad? A It was good.
It was the best land I had at
that time.

Mr Bent. How deep did you
say that was filled?

A From 1 to 10 feet.

Mr Byrne To what extent,

if you know is that muddy water from Bear River ditch used for the purpose of irrigation in the County of Placer?

A It is used extensively. I at what places?

A You can not farm successfully in the foot-hills without water.

I state at what places it is used and for what purposes?

A It is used on the divide between Bear River and North Fork.

I will you name some of the places where it is used.

A Gold Hill, Virginia Town, Oplis, Newcastle, Pearbryn, Pino and in the vicinity of Auburn and for some distance above Auburn.

I What kind of farming or fruit raising is carried on in the vicinity of Newcastle, and how extensive?

A The raise berries there and fruits of all kinds, even oranges.

I state how extensively

if you please? a I could
not tell to what extent but
there has a great deal of
it been done.

I have you paid any attention
to the subject of the amount
of the natural washings of
the country that is to say,
the material discharged into
the river from sources other
than mining? a I have some
yes sir

I state where and how extensive
your examination has been?

a Principally on the Iowa
Hill Ridge. I have noted the
reservoirs in which the mining
and the water from have been
filled up with sediment & depth
varying ^{from} ~~up to~~ one to 4 or 5 feet.
One of these reservoirs has
been built but a short time,
a few years.

I know what source the
sediment which filled up those
reservoirs come? a From the soil

I have you noticed the
washings of hill side into

The Stream? A Yes sir

I state about that without
having me ask you questions?

A. The washings from Iowa Hill
up, were considerable, from
Iowa Hill up to Damascus
Levell say, that ~~is~~ owing
to the large amount of sheep
being raised there, log roads,
cutting of the timber, wagon
tracks and so forth, and
above Damascus the soil
changes. The top of the ridge
there is composed of a fine
sediment, you might call
it dust, which I suppose
is Volcanic ashes or some-
thing of that character and
at the summer time, walk-
ing through the timber or through
the brush over the country
then any where you come
back up a dust, the dust ar-
ises when you are walking.
It is very light material and
a good deal of that washes
in. In fact the water that
ever use for mining purposes

during the winter is very muddy
 I do then any mining on the
 stream above where you
 divert your water that comes
 cause it to be muddy or
 is it muddy from natural
 causes? A. From natural
 causes, there is not mining.
 on the Sawtooth Cañon
 taken its source from Sadpole
 Cañon and that is above
 where there is any mining
 done there is mining below it,
 but not above

I Mine above the head of
 the ditch? A. No.

I Mention any other causes
 that contribute to the nature
 washings if you can think of
 any? A. Well, the
 wagon roads wash out a good
 deal. They are generally worn
 down more in the shape of
 ditches than of roads now,
 they are worn down consid-
 erably

I How deep?

A In some places, several feet.

I Can you state about how many feet? A Yes sir, there are some roads on Donner Hill where there has been considerable logging done, that has worn down as much as 3 feet

2 Are there numerous roads all over this region which you have spoken of?

A All over the country you might say from Soda Springs and every where down all over that country there are wagon roads

2 You say Soda Springs Valley? A Soda Springs Valley, Near the source of the North Fork of American River

2 Near the Summit of the Sierra? A It is in a basin

2 How far from the Summit of the Sierra?

A The altitude there is about 6000 feet. It comes to about 6000 feet below the Summit Station in altitude

I have as to distance?

A. That I cannot tell you what the distance is.

I are there or are there not, roads extending over the summits of the Sierras?

A There is an old wagon road passing over the main ridge between the North and the Middle Forks of the American River but it has not been used much lately only as a trail for stock men.

Q. You spoke of, at some particular places, there having been a good deal of logging done? A Yes sir.

Q In what industry, for what purpose?

A That is for building purposes principally.

Q In the manufacture of lumber? A Yes sir.

Q How extensive is that business carried on?

A Not very extensively.

Q Do you know anything about the extent of that business

on the Dutch Flat or Gold
Run divide? A I know
that it is pretty extensive
there about Alta and above.

2 Do you know where the
Jowle Lumber Establishment or
Manufacturing Establishment is?

A At Alta, I do

2 Have you been there?

A I have

2 State to what extent the
Soil has been disturbed and per-
verged from logging operation of
the Jowle Brothers?

A. The side hills there have
been torn pretty badly by log
teams and dragging logs over
it

2 What effect on the Natural
washing does the cutting of
timber have? A Well, I
think when the timber is off
there is a good deal more wash-
ing

2 Have you ever made an ex-
amination of the place where
the slate and granite beds
come together on the Clearwater River

A Yes sir

I State to The Court when they do come together?

A The granitic rock and slate from to the west of my recollection about half a mile above Rattlesnake?

I Is the point of contact easily distinguishable to any body there? A Yes sir

I Now I will ask you if above that point, and between the mouth of Canon Creek, there is any granite formation whatever?

A I have been on the river from the point I just mentioned to Rattlesnake?

A Rattlesnake up to Soda Springs Valley and I have seen no granite on the river anywhere below Failer's Canon

I Let you see any below Rattlesnake Bend and the mouth of Canon Creek? A No sir, there is none

Mr. Cadwalader Where is Failer's Canon? A Failer

Camin is one of the tributaries of the North Fork of the American River. It is about 50 miles east of Iowa Hill as near as I can recollect.

Mr Byrne Have you ever examined the mine of the Gold Run Co., at Gold Run?

A Yes sir

I state what the formation of the bed-rock is there?

A It is a hard slate.

I Is there any granite in that mine? A There is no granite in that mine.

I State what is the character of the material contained in that mine?

A The bottom material resembles this (No. 1) that is blue gravel only it appeared to me to be more rocky than this.

I What percentage of it would be rock?

A I would judge that there would be 75% of it rock. I Proceed to describe it—

describe the characteristics
of the bank

A The best of my recollection the blue dirt is about 80 feet in depth. The bottom about 20 feet is hard cement

2 As hard as that now before you? A Yes sir, some of it harder - some harder cement than that there. About 60 feet up it is softer, not so much cemented

3 From your observation and experience how much more of the material in the Iowa Hill district in these various mines which you have described, could be crushed with the same quantity of water than can be crushed of the material in the Gold Run mines

— how many times more
Mr Hart. That is almost assuming the fact

The Court. State whether there is more and if so how much?

A There is more than

twice as much of the gravel
at Sawatell than could
possibly be washed off this
material, blue gravel (No 1)

Q What effect do the
meltings of the snow or the
passing away of the snow
from the effect of warm
rain, have upon the nat-
ural washing of the country

A It must have an erosive
power, because the water
running from under the snow
is always muddy. The snows
are very deep

Q In what manner do
these masses of snow usu-
ally pass away after a
warm rain has fallen
upon it? A. They thaw -
the principal thawing is at
the bottom next to the earth
and as the snow melts
the whole mass crushes
down, settles down, and
disturbs the earth on the
deep side hills, it keeps
pushing down hill

Q Does it ever go over in masses, in large masses that you know of? A It does. The effect of the snow can be seen on the flumes on the side hill, they are pushed over, all of them pushed over, down hill.

Q Have you ever observed any land slides in that Section of Country? A I have. I describe them.

Q There are the evidences of heavy land slides about Humbly Canon in the vicinity of Damascus.

Q State any others that you know of?

A I have seen evidences of slides on the North Fork opposite the head of Secret Canon and also, above, immense slides of lava formation or volcanic mud that covers the gravel - it is a deposit that covers the gravel deposit, to a depth varying from 100

feet to more than 1000.

I form my observation and Experience the proportion of material coming down the Quezencu River is suspension, comes from the material wash-ups and what proportion from mining &c. I could only judge that by the appearance of the river during freshets, and above where there is mining being done.

I can, and state the result of your opinion, after observation.

A The River during freshets and immediately after, appears to be a s^d muddier above where the mining is done as it is below.

I still that don't answer my question as to the proportion. The greatest amount of mud is generally carried during high water and therefore I judge that there is about one half.

I take, for instance, the Gold Run mine and from your knowledge of the material there

and your observations of the
causes of these coashings, what
proportion of them in your
opinion would ever pass the
River at Rees Bridge?

a In Suspension?

2. In Suspension or otherwise
say first in Suspension?

a I have never made any
test of it

I state otherwise than in
Suspension, what is your opinion
on, what proportion of those
tailings would ever reach
Rees Bridge, or even do reach
Rees Bridge, presently, if you
prefer to put it in that shape?

a I do not think there is any
more I have been mining at
Jona Tree

I do not think there is
any that reaches Rees Bridge?

a Except what may reach
it in Suspension.

2 And would you state what
percentage that probably
would be? a It would
be very slight.

I Woud it be in your opinion as much as passes the same point, from Natural Causes, natural washing?

A Oh no

I have much less in proportion

A Well I do not think it Woud be possible for more than 2 or 3 per cent. of such material as the blue gravel, to go in suspension

I At all? A At all, I of all that does go in suspension, how much in your opinion Woud even be carried as far as Rees Bay?

Mr. Hunt. Of course this is understood to be guess work
Mr. Byrne It is understood to be the estimate of this witness from the observation and from his experience as a miner. Woud it all go? A I do not think it Woud all go

I Woud any part of it go?

A There might be a small portion of it get to Rees Bay

2. A small proportion of the
 2 or 3 percent which might
 possibly be held in suspension
 a year or so

Crop-Examination of John B. Hobson

Mr. Hart. Did you ever study
 surveying? A I did, yes
 I where? A at home
 I ^{in a school} where do you mean when
 you say at home? A I found
 it was necessary to inform my
 self on the matter to aid
 me in carrying on my mining
 operations, and I bought
 some instruments used by sur-
 veyors, and some authorities
 on that subject.

I What authorities do you
 buy on the subject of surveying?

A Gillespie and Davies and
 Crocker and informing myself
 to the best of my ability

I How do you estimate the
 contents of a pit such as

the Gold Run pit?

A I do not estimate the contents of the Gold Run pit

How do you do that?

A By measuring the sectional area of it

I Well, give us a more minute description as to how you would go about to do it?

A I would level the slopes.

How would you level the slopes? A With a levelling instrument.

I Well how would you finally get at the cubic contents?

A I would measure the slopes.

I Measure the slopes, is that all?

A Yes sir, I would reduce the area into square yards and from that into cubic yards.

I How many cubic yards have been mined out of Iowa Hill proper since 1868?

A You say cubic yards?

I Yes? A. 72,600

I How did you arrive at that amount?

A. I measured it with a
Cape line

Q When did you make that
measurement? A In November

I got a view of testifying
a 'ther case? A No, not for
that purpose. I read a statement
in the Union, and I wanted
to see how much ground had
been washed

Q A mere matter of curiosity?
A Yes.

Q Do you know how much
had been taken off before
that time?

A How much ground?

Q Yes sir?

A I measured the whole pit

Q How did you ascertain how
much had been taken out before
1878?

A By measuring the whole pit,
the whole excavation

Q Did you measure it before 1878? A I did, yes sir, one time before

Q When did you measure it before 1878?

A It was in September 1876, I think. I went there with a view of purchasing some more

Q Did you measure it in 1878?

A In 1878, I did not

Q How did you know and how do you know now, how much had been taken out before 1878?

A Of the gravel?

Q Yes sir? A By measuring the pit

Q Did you measure the pit in 1878? A No sir

Q Then how do you get at what was taken out before 1878?

A By measuring the excavation

Q How do you know that excavation was made before 1878?

A Because it was there, the excavation of the Iowa Mill pit on the North North side

Q How do you know it was all there before 1878?

A The whole excavation. Q Yes sir. A It was evident that it was there before 1878.

Q Why was it evident?

A Because the bank that was originally there was absent.

Q When was that?

A Before 1878.

Q Now is this amount 72,000 cubic yards a part of that excavation?

A Of the present excavation?

Q Yes sir. A Of the excavation of 1878? A That was made since 1878.

Q How do you know that this was made since 1878 and the balance was made before 1878?

A Because I saw the man mining it.

Q But is it not all in one pit? A It is all in one general pit.

Q Now how could you tell exactly the number of cubic yards that were taken out before 1878, out of that pit - and the parts that have been taken out since 1878?

A I measured it all together.

Q I know but how can you tell, can you make a dividing line? A I deducted a portion that was mined since 1878. It is plainly marked.

Q How is it marked? - the figures "1878" on them? Or how do you make the division? How do you make the distinction between the two kinds of work? A If you will allow me I will make a little sketch to illustrate.

< Draws sketch >

A There is the manner this was, and this is the form the pit appeared in 1876, approximately so, and this is the mining that was

done by Mr Booth since.
 A portion of the bank runs
 out here so that you can
 get it pretty correct

Q Explain that to the Court
 <The Witness does so>

Q How do you know that
 a portion of that large pit
 has not been mined out
 since 1878? A I think if
 it had I would have seen it

Q Now that is simply a
 matter of inference and not
 the result of exact measure-
 ment, then, so far as
 that is concerned. A If
 there was mining done
 there in that pit I would
 most likely have seen it
 being in Iowa still every
 day.

Q How much was done
 between 1876 and 1878 in
 that pit? A There appeared
 to be none that I could see

Q Well do you know
 whether there was?

A I could not tell of course

Q You do not know?

A I know. There might have been some shovelled out of it but there was none of the main bank moved.

Q How much is there in the entire excavation including the amount of excavation since 1878?

A 15 acres

Q And what depth?

A Well I averaged it at 25 yards depth.

Q Well you did not measure that? A I could not measure the ground that had gone. The only way that I could arrive at an estimate of that judging from the banks as they stood.

Q What does that make in cubic contents? A I did not figure it up — that is that 15 acres by itself.

Q You do not know what proportion of that was mined before 1876? A What proportion

of what? Q Those 15 acres
25 yards in depth?

A That was all mined before
1876.

Q That was all mined?
A That 15 acres

Q 25 yards in depth?
A Yes sir

Q Was there any mining
done in that claim between
1876 and 1878? A There
were no marks of mining
when I went there in 1878
— there were no marks of
mining

Q You went there in 1878?

A I went there first in
September 1876. I returned
there again in April 1878

Q Now in September 1876
were they mining in that
mine? A In September
1876 they were not

Q Had they been mining
during that year? A I
could not tell whether
they had or not

Q You do not know? A I

do not

Q So you do not know how much of that excavation had been made during the year 1876 before you got there? A No.

Q And you simply guessed as to whether or not any of that excavation was made between 1876 and 1878?

A I stated there were no marks of any additional excavation.

Q Now you go and look at a large pit of that kind - could you in 1876 and then afterwards go back in 1878 and determine without measurement whether or not any additional mining had been done there?

A I could tell whether any recent mining had been done.

Q Within the two years? A Yes sir.

Q Did you look with a view of determining that in

1878? A not particularly so
 Q of the amount excavated before 1878 - what was the material of which the amount excavated before 1878, was composed?

A, I judged by the banks which are still standing surrounding the pit. It was all gravel, composed of decomposed rock and quartz pebbles

Q And some boulders?

A Near the bottom there is a stratum of blue gravel

Q How deep? A About 20 feet similar to this <No. 1> but not so hard

Q 20 feet in depth?

A Yes sir

Q Above that there is some heavy rock is there not? A Above that it would be difficult to get a rock as large as that <referring>

Q Well there are some

heavy rocks, large rocks?

A None heavy

B None heavy? A I have
seen none heavy

Q In any of these mining
places you have never seen
any of this large material
in the upper stratum?

A Yes, in some places
there are

Q In that place?

A In that place not.

Q You have never seen
any there? A No sir

Q About how much of
the material was equal
in size to the rock you
then held in your hand?

A All very small percentage
of it?

Q Well what percentage?

A I would say not to
exceed 10 per cent on the
Dona Hill Bank above
the blue gravel in those
old washings before 1878?

A I could not tell you
that, because it may have

varied in thickness, I do not know the thickness that gravel was where it was worked off

Q Estimated to be 20 feet in depth, it ^{would} contain nearly 300 000 cubic yards wouldn't it? A I do not know. I did not figure it up.

Q How long will it take you to figure it now?

A Some time. I am not a mental mathematician

Q You cannot work it very quickly? And.

Q Now in speaking of this as Iowa Still is it what you call the entire Iowa Still or what you call Iowa Still proper, the 72,600 yards? A This is a portion of Iowa Still proper

Q Now then I want to know the entire amount of cubic yards taken out of the entire Iowa Still since 1878 and dumping into the North fork? A I may have it

here. I will see [referring to]
Dumping into the North
fork?

Q Yes sir, since 1878?
A 72600

Q The balance you said
dumped into Indian Creek?

A Indian Creek

Q How far from the
junction of Indian Creek
with the North fork?

A It is several miles, I
cannot recollect. If you allow
me to look at the map

Q Well you can look at
the map if you want to?

A It will be something
over four miles from Down
Trail proper to its junction
with the American River

Q What is the nature of
that Canon? A In places
at the lower end it is steep

Q Well how far up is it
steep? A About 2 miles

Q How steep is it for 2
miles? A I never examined

Q Can't you give an

estimate of the number of feet
fall to the mile?

A It would be probably 500
feet to the mile for the lower
two miles

Q And how much the bal-
ance of the way, the upper
2 miles? A The grade is
light there. I do not know
what it is, I could only
state from hearsay

Q Well about how many
feet would you judge it to be?

A I would judge it to be
100 feet to the mile

Q You do not think that
is a steep grade up there?

A No that is no grade at all
for miners. Further up the
stream the grade is about
the same

Q About 100 feet to the mile?

A Yes Sir

Q During times of freshets
the water goes down there
like a torrent don't it?

A Well it does, in
large torrents.

Q How far could you hear the roar of the water as it runs through that Cañon?

A At the house that I occupied

Q How far is that?

A A quarter of a mile

Q Through mountains; mountains and hills between you? And it is a gradual slope from where I live down to Indian Cañon

Q How how many million cubic yards have been put into Cañon Creek from Iowa Hill since 1878?

A Not one cubic inch

Q I do not mean Cañon Creek, I mean Indian Creek

A Into Indian Cañon

Q Not one cubic inch?

A No sir. That is another question altogether. I have an estimate of the cubic contents of all the ground that was worked there on the land of Indian Cañon

Q Well what is it?

A 140 acres

Q How deep? A Well it is 20 yards deep

Q State you the amount or cubic contents of those eyes sir

A What is? A 13,552,000.

Q You say that was worked since 1878? A Oh no, that is the total workings

Q The total workings?
A For all time

Q How much of that has been worked since 1878?

A I have made no estimate of that kind

Q Now that 13,552,000 cubic yards if it had remained in Indian Canon would have filled that Canon level full from the place where it was dumped to the North fork of the American river wouldn't it?

A And more than that

A No sir

Q Well how much would

is have lacked? A A great deal

Q How high are the mountains on each side?

A They are all the way 300 feet to 1000 feet

Q What is the shape of that Cañon? A Like all Cañons

Q You can show us with that book? A The original shape of the Cañon would be about like a parabola the slopes are steeper near the bottom and as you go up they are less

Q What is the nature of the materials that have been dumped out of the Iowa Steel mines into Indian Cañon? A There has been some blue gravel washed from the Morning Star and from the Iowa Steel proper. I have a little map here which probably will show you

Q How deep is the blue gravel?

Q The blue gravel at Morning Star is about 80 feet in depth

Q Where is the Morning Star located? A It is on the South side of Iowa Hill on the South side of Indian Canon

Q How many mines of the Iowa Hill district dump into Indian Canon?

A The Watts, Enterprise, Golden Gate, Trio, Home Ward Bound, Parris Claim, Evening Star, Ladder, Morning Star, De Cruse, Orion, at Iowa Hill also the Elizabeth town mines and the Roach Hill mines that is on the South side of Roach Hill, and a portion of the Independence Hill

Q Have you included all those mines in your estimate of the amount of material that was thrown into Indian Canon?

Q I have

Q All of them?

A I have

Q How did you arrive at your determination or at your conclusion as to the number of cubic yards in each one of these mines?

A I measured it

Q Measuring each one?

A Yes sir

Q Did you measure each one of those mines out of curiosity? A Yes sir. I measured a great deal of that Country out of curiosity

Q That was because —

A Yes? I have been measuring it for the last 4 years

Q When did you make these measurements from which you testify?

A Some of them I made within the past 18 months. Most of them were made, some of them were made prior to that time

Q Has there not been mining

done on those streams within the past 18 months - in those mines I mean?

Ayes Sir, some of them
Q So that your estimate does not include the amount of mining done within the last 18 months? A It includes all the mining that was done up to the present time, my estimate does.

Q How can you estimate the amount that has been done up to the present time when you made your measurements more than 18 months ago, or 18 months ago and more than that? A Well I made measurements at my own mine. That is the mine that I am superintending there more than 18 months ago.

Q But I mean these mines that you are not superintending, I mean the mines that are dumping into Indian Cañon, when did you make the measurements that you have

just mentioned as dumping
into Indian Creek?

When did I make them?

Q Yes sir? A I could
not exactly state the dates
for it. Whenever I had leisure
time I made them

Q Well how long ago was
it? A Well some of them
as late as November

Q And the balance of them?
A From the time that I
went to Iowa Hill first
I have been making measure-
ments

Q How many of them did
you measure as late as
November? A I have
measured the Watts and
Enterprise, the Swiss Claim
and the Roach Hill mines

Q What are they?

A A great number of them;
it is one connected pit

Q Were they separately
enumerated in your enumer-
ation of the mines dumping
into Indian Canon A They

were not

Q Now then when did you measure the bottoms of those mines? A Well through the summer most of them

Q This year? A Yes sir

Q Did you measure them all this year? A Most all of them

Q Well that is not all?

A I did not measure all of the Independence Hill mines this year

Q What mines have you not measured this year? among the mines that bail into Indian Cañon?

A The Elizabethtown mine, I think that is the only one I did not measure this year

Q A part of the Independence mines? A Yes sir

Q When did you measure the Elizabethtown mines?

A About 2 years ago.

Q Have those mines been working since that time?

A They have not

Q When did you measure that portion of the Independence Hill mines which you did not measure this year? A The first year that we were mining

Q Have those mines been working since that time?

A Not that portion that is measured

Q Nor that portion that was measured at that time?

Ans no

Q You have ~~been~~ measured all that has been working since your first measurement?

Ans no

Q How much of this 13,552,000 cubic yards was put into Indian Canon since 1876?

A I made no estimate of that kind

Q You do not know? Ans

Q How much of this 13,552,000 cubic yards is in Indian Creek now?

A There is a large amount of it there but

I do not know its cubic contents

Q And most of it is near the Iowa Still is it not?

A Oh no

Q Where is it? A It extends down the Cañon

Q How far? A I think the tailings begin to be deep now opposite Elizabethtown, they have been worked out

Q Where is Elizabethtown?

A Here < showing >

Q Where with reference to the mouth of the Cañon?

A It is above the mouth of the Cañon

Q How far?

A A little over 2 miles on the South side of the ridge, of the Cañon

Q Do you know the depth of those tailings?

A At one place I do

Q Where is that?

A At the Morning Star Bridge

Q Where is the Morning Star Bridge?

A It crosses the Cañon a little above the town of Iowa Hill

Q That is above the Iowa Hill mines, is it, in the Cañon? A It is

Q From what mines do the buildings above there come? A From the Watts, the Enterprise, the Golden Gate, the Trio, the Stone ward Bound, the Swiss claim, the Evening Star, the Roach Hill mines and portions of the Independence Hill

Q What are the cubic contents of the pits of those several mines, the washings of those several mines?

A I have not made it separately

Q What? A I did not make them separately

Q Can't you tell me?

A I can't without making a

separate estimate of them

Q This is a lumping estimate that you are making is it not? This is a sort of lumping estimate you are making here? You lump it all together?

A Not at all

Q Why can't you tell me the amount of cubic yards in these several pits?

A If I knew that you would ask me that question I might have done so probably

Q Of course you could not know what question I was going to ask you?

A No sir

Q I have not got the data in your book from which you can make that calculation? Ayes

Q Well I want to know

A You can have the number of acres here of each pit and the depth

Q Give us the number of acres in all those pits

together and the depth,
 or each pit? Allwatts and
 Enterprise, 9 acres; Golden
 Gate and Iris, 3; Homeward
 Bound, 6; Swiss Claims, 10;
 Evening Star, 2; Roan
 Hill and Independence
 Hill, 30; that is the Roan
 Hill 25 and Independence
 Hill, 5; making 30.

Q Is that all? A That
 is all above that bridge

Q 60 acres is it not?

A Yes sir

Q What bridge is that? Is
 that a suspension bridge
 that you speak of?

A It was, but now it is
 under the tailings

Q How deep are these
 several pits? That is one
 thing I forgot to ask you?

A They would all average
 about 20 yards

Q Now, how long are the
 tailings that you speak
 of at this bridge?

A In miles

Q Yes. I want to know how long the filling is you speak of that you know the depth of?

A I could not testify positively, only to this one point

Q You do not know of any depth excepting at this one point? A I do know of two others. That is I know they are deeper than that, but I could not tell how deep

Q Deeper than what?

A Deeper than 60 feet

Q At what place?

A Below

Q All the way below?

A Not all the way below

Q At two other points that you speak of? A Yes sir

Q How long is this filling which you say is 60 feet deep, I mean the 60 feet of filling which you spoke of as 60 feet deep? A Nearly a mile

Q You can see that it is 60 feet deep for nearly a mile? A Yes sir.

Q Now what is the cause of this filling at this point that you speak of, at that particular point?

A Which point do you mean?

Q At this point we are talking about now where this filling is 60 feet deep.

A What is the cause of the filling?

A What is the cause that the fillings remain there?

A The Orion mine dumps into the Canon below this point about half a mile and creates a large dam and backs the tailings up from the ^{other} mines.

Q It don't back the tailings up but stops them?

A Stops them yes sir.

Q It don't send them up that 1000 feet to the mile?

A Yes they run up hill sometimes.

Q They do, do they? Ayes,
that is the tailings flow
up stream

Q Large heavy rocks and
boulders? Ah yes certainly
they do. If there is a pile
of gravel in that shape
<steep> this inclination is
down hill and sometimes
the tailings will run up
the stream

Q That is they will roll
down on the side where
there is a large amount of
tailings in place?

Ayes sir. I do not wish
to be understood that they
run up grade

Q Now then at this place
where the Orion mine throws
its dump out you say it
forms a dam there and that
has stopped these tailings,
is not there another mine
on the South side of the
stream that throws out also
its tailings which completes
the dam at that point? Ayes sir.

Q That is the cause of this extreme filling at that place? A Yes sir

Q And that is the reason why some of these fillings to have not gone on down further? A Yes sir that is the cause of the filling there.

Q I'm giving the list of mines above the point mentioned on Canon Creek did you give the mines on both sides of the stream?

A I have given none on Canon Creek at all

Q I mean Indian Canon

A The mines on both sides?

A Yes You have given them on both sides of Indian Canon

Q Where is the mine located? A It is on the South side of Indian Canon

Q Where is Strawberry Flus located? A On the South

side of Indian Cañon
Q and Bird's Flat?

A On the South side of
Indian Cañon

Q And the Roach mines?

A On the North side of
Indian Cañon

Q Now then you say, or
at any rate I understood
you to say that there were
72600 cubic yards sent
out of the Iowa Steel mine
directly into the North fork
of the American river?

A Yes. Not directly. It was
indirectly. It was first
dumped into the Cañon.

Q What Cañon?

A Jamieson Cañon which
runs directly into —

Q Unt'g > How far is it
from the point at which
that dump is made to the
junction of Jamieson's Cañon
with the North fork of the
American? A Well it
would be a horizontal distance
of about a mile I guess.

Q What is the fall there?
 How steep is the bed of
 the stream? A I might
 approximate it by refer-
 ring to some altitudes

Q What would you say
 it was about? A It is
 over 1000 feet

Q Over 1000 feet in a
 mile? A Yes.

Q Is it as steep as
 Canon Creek? A About
 as steep

Q And the material
 that is thrown into Jamieson
 Creek goes down into the
 American river? A It
 goes into the American
 river

Q Of the 72600 cubic
 yards, how much is im-
 mediately at the dump?

A Well it must be all
 in the immediate vicinity
 of the dump

Q I ask you immediately
 at the dump? A I could
 not tell you that.

Q If that 72600 cubic yards had piled up there it would have stopped the whole river would it not? A Yes if it had staid there it would

Q If it had staid there it would? What other mines dumping into the North fork of the American river make up the 30 acres you spoke of?

A The 31 acres?

A Yes. The 31 acres

A The Independence Hill, the Union, Pritchard, Aurora and the Wolverine.

Q How much from Independence still did you say? A 20 acres

Q How much from the Union? A 2 acres.

Q How much from the Pritchard? A How can you mean the amount of ground worked since 1878?

A Yes that is the 31 acres
A Pritchard two, Aurora

three; Wolverine 3.

Q Now then how many acres from Iowa Still are dumping directly in there? At during that time?

A Yes. A one acre

Q Since 1878? A Yes

Q That makes 31 acres? A Yes.

Q What is the depth?

A The depth varies.

I could give you the depth of the different pits

Q Give us the depth of the different pits?

A The Booth at Iowa Still, 45.

Q You did not give that before. A That is at

Iowa Still. That is the only one at Iowa Still.

One acre forty, five feet.

Independence Still 20

acres, 75 feet; Union, 2

acres, 45 feet; Pritchard

2 acres 75 feet; Aurora,

3 acres 75 feet; Wolverine

3 acres 75 feet.

Q What did you make the entire cubic contents of the washings of those several mines?

A 3,585,800

Q Since 1878? A Since 1878.

Q Do you know how much had been washed from those mines between 1875 and 1878?

A I could tell you. There was none from the Wolverine, none from the Aurora, none from the Union, none from Independence Hill and none from Booth.

Q Or any from Iowa Hill?

A Not that I know of.

Q How do you know that there were no washings from any of those?

A There were no marks from any. The Wolverine was not mined at all until within two years ago. The Aurora the same, the Union was worked, that

is some of it was worked in early days and the timber was growing all over the pit, young timber. Independence still, the mine I have been running there I know had not been worked, that is it had not been worked before that time recently.

Q Recently? A Recently,

Q Recently before that time? A Yes.

Q How do you know it had not been recently worked before that time?

A Because there were marks of workings there, there were surface workings and the timber was growing over it, young timber.

Q When was the Jameson worked? A I do not think it was in California when the Jameson was worked.

Q Do you mean to say there was no mining on that side of the American river

the North fork of the American river between 1876 and 1878? Ans.

Q You do not mean to say that? Ans. sir I do not

Q What mines were worked there between 1876 and 1878?

A The Pritchard

Q The Pritchard? Ayes

Q And what was the extent of its working between those two times? A I could not tell you.

Q Between 1875 and 1878?

A I could not tell you

Q Were there any other mines working there between those dates? Ans. that I know of

Q Do you know whether there were any others?

A Between 1875 and 1878?

Ayes.

A I had no opportunity to know

Q You were not there?

Ans. sir. I say as I

told you before, that I was there once in 1876

Q You do not know the extent of the mining between those two dates?

A No sir I could not tell what I did not see

Q You were speaking today of some drift mining
Ayes.

Q What claim was that?
Where you say the dirt was worth so much per load?

A The Mountain Gate Mine of Damascus

Q At Damascus? Where is Damascus?
A It is about 10 miles east of Lowa Hill

Q On the bank of the river?

A No sir

Q How far from the river?

A It is at the head of Damascus Cañon, a tributary of Stumbug Cañon

Q Where is Stumbug Cañon?

A It is above Cañon Creek

Q Running into the American

river? A Into the American river. Damascus is ~~two~~ miles from the American river.

Q I will ask you whether or not all the mining in that district — first is that in the Iowa Still District? A It is on the Iowa Still ridge. It is considered the Iowa Still district.

Q I will ask you whether or not all the mines in that district directly or indirectly rail into the American river or dump either into the American river or its tributaries? A They do.

Q All? A All.

Q How many acres of land did you say had been mined in that district? A 358.

Q That is only by the hydraulic process isn't it?

A Hydraulic and drifting. Some of these mines that

I enumerated here were first drifted and afterwards by draulicked

Q Only 358 acres have been mined in any form?

A Yes

Q And the balance remains to be mined? A No sir there are considerable more than that, drift mines above, but I did not enumerate them

Q I want to know in the entire district how many acres have been mined

Mr Belcher Surface mining?

Mr Stant Any kind of mining in the district

A The Canons have the appearance of having been mined extensively in early days, that is prior to the time I went there

Q You do not know when that mining was done?

A I do not

Q Whether it was done

before or after 1876?

A It was done before 1876
that is certain

Q All of it? Who is
not all of it. There has been
some Cañon mining done
since

Old as not there been a
great deal of Cañon mining
done there since 1876
since the winter of 1875-6

Oyes. I have seen
Chinamen working in the
Cañons since that time

Q There has been a great
deal of it done there, has
there not? A Of Cañon
mining? Oyes.

A Not a great deal of
Cañon mining since that
time

Q How much has been
done there? A Well I could
not give you any estimate
of the area

Q How many carloads
per day are taken out of
the Mountain lute mine

at Damascus?

A It varies according to circumstances.

Q What is about the average?

A 60.

Q Sixty car loads? A Yes.

Q What proportion comes that has to the amount driven out of the Gold Run mine for instance?

A It would be small in proportion.

Q - 100th part?

A I did not make any estimate of the proportion.

Q Now this Mountain Gate drift mine at Damascus is a very large drift mine is it not?

A Yes.

Q And will probably give the ordinary proportions between a large drift mine and a hydraulic mine when compared with the Gold Run mine?

A It is not such a mine as could be worked with a monitor, but the dirt from that mine is washed by the hydraulic process.

Q That is it is washed with water?
 A It is washed by the hydraulic process with water under pressure.

Q It is not what you call a hydraulic mine?

A I call all mines that use water under pressure hydraulic mines.

Q I. What what the miners call a hydraulic mine?

A Some of them do.

Q Does a miner who knows what he is talking about call a drift mine a hydraulic mine?

A It all depends on what he thinks about it.

Q Don't you know that there is a well defined distinction which has been long established between what is known as a drift mine and what is known as a hydraulic mine?

A Yes, I do.

Q Don't you know that hydraulic mining particularly refers to that process by which you take a stream of water

and knock down a mountain
And take the gold out?

A I do not understand your
question. Knock down a mountain?

Q Yes? A. I do not understand you

Q You never knock down mountains up there? A. No sir

Q I sent you at Dutch Flat,
and at other places know that
where the old mountains have
been washed down there is
nothing left but the bed-rock
below where the mountains
had been before?

A I would not consider that
a mountain

Q It has been a mountain
at one time? A. No sir

Q What was it?

A A ridge of gravel

Q How high? A. I do not
know the height of the gravel
It was not a mountain

Q They worked that ridge
down to the bedrock and
made a plain where a ridge

had previously been^d.

A They did

Q And the hydraulic process
 refers to that particular method
 by which you know the entire
 bank down from the top dirt
 down to the bed-rock and
 wash it out through tunnels
 and flumes, while drift mining
 refers to that process, by which
 you tunnel into the ground, get
 out your dirt and haul it
 out on cars, and then sub-
 ject it to the washing process.
 Is not that the difference?

A That is the difference.

Q That is the difference?

A Yes

Q When you speak of hydrau-
 lic mining you speak of
 mining where you do not
 tunnel and leave the great
 mass of dirt above. You
 speak of the case where you
 start at the top and wash
 the entire embankment down.

A Yes.

Q As deep as the gravel bed

may run? A Yes.

I Pay dirt and all other kinds of dirt? A As deep as it will pay

I And some times 200 feet deep? A Sometimes yes

I While in case of drift mining you leave all the surface dirt and simply tunnel in and get the gold out, or the gold-paying dirt and then you wash it?

A The reason mines are not drifted is because they are not suitable for by draughting

I And the reason why they are by draughted is because they are not suitable for drifting, too, isn't it?

A Yes, that is it

I Are there any other by-draught mines above Canon Creek that dump into the American River?

A There are

I What mines are those?

A I say don't kill and a large amount of ground has been

Washed out about Green Valley

Q Any others? A Yes,
a large amount of ground was
worked out in Strawberry Cañon
and its benches

Q Any others?

A On the North branch of
the North Fork.

Q There are two branches there.

A Yes, there are mines in
the vicinity of Alta

Q What are they?

A They have been worked by
hydraulicking and drifting
both

Q What are those mines?

A And also at a place
called Lost Camp

Q Name those mines, if you please

A The Starkness Mine at Lost
Camp

Q And that the other point
just mentioned by you - at
Alta?

A Also at Blue
Bluffs above Alta

Q Well, any others?

A And there has been con-
siderable mining on the

South Branch of the North Fork
at Hahai Ban and numerous
other Ban the name of which
are unknown to me

2 Do these mines all dump
directly or indirectly into the
North Fork of the American River.

A They have all been dumping
into the American River, and
also the Canon - There is Tat-
pole Canon and Jaylor Canon
and New York Canon and Long
Canon - Tributaries to the South
Branch of the North Fork, have
been mined extensively

2 What is the nature of the
American River, the North Fork
of the American River above
Canon Creek?

A Well, I have been only
on the river bed at points, but
I have been along the ridge
nearly the whole distance

2 What is the nature of the
river? A It is some places
flat, and some places more
steep its grade

2 Extremely steep?

A. In some places it is

2. About what comes in the average of the fall of that river from the point, the extreme point, at which you have visited it down to Cañon Creek? Where these mines are?

A. Did you say below Cañon Creek?

2. No, above? Say from Cañon Creek to the head of mining, to the extreme point at which mining has been done?

A. Well, I do not know exactly the altitude only from the altitude given by Goodyear at the mouth of Humbery Cañon

2. Yes? A. I can give it to you in a moment. At Pecos bridge, Goodyear 1.146 feet, at the mouth of Humbery Cañon 2.051 feet

2. That is the altitude?

2.051 feet. I want the distance in miles between those two points?

A. That would be according to those figures 900 feet

Q. 900 feet is the distance?
 A. That is the difference in altitude

Q. What is the distance
Mr. Rhodes Where is Humbly
Cannon?

Witness indicates on map

Q. What is the distance be-
 tween those two points?

A. Approximately it is nearly
 eight miles

Q. That makes an average
 of over 100 feet fall to the
 mile? A. That is just
 taking the approximate distance
 from this map

Mr. Belcher Is that a straight
 line? A. That is nearly
 a straight line. It does not
 follow the meanders of the
 stream. I say about 8 miles.
 It might be considerably more
 than that following the mean-
 der of the stream

Mr. Hart Is Humbly Canon
 the extreme point, at which
 mining is done? A. No sir

Q. Now running on up —

A <Antiq> Sailer Cañon, New York Cañon are the ex Creeks only that I know of at the present time

Q What is the altitude of Sailer Cañon?

A I do not know what the altitude of the Cañon is, but the top of the ridge there is over 6000 feet

Q How far is it from Humberg Cañon?

A It must be about 20 miles

Q The river is much steeper above Humberg Cañon than below? A Between Humberg Cañon and Sailer Cañon the river is pretty flat, its grade is light

Q What would you call a light grade? A. 100 feet. It is lighter than it is below and above

Q How far is Sailer Cañon from Humberg Cañon?

A It is about 20 miles

Q There is no regular grade there, is there, up the bed of

the river? A You mean a
graded road

Q No, uniformity in grade?

A It benches, in places. The
grade of the river is moderately
light in places, and then there
would be a bench or fall and
then would be flat, a piece.

I cannot tell you exactly
what the grade would be there

Q And from Pailor Cañon to
New York Cañon what is the
grade?

A It is greater
from there to Soda Spring Valley
I know is that?

A The grade is greater from
Pailor Cañon to Soda Spring
Valley

Q How long since you have
been up that river or along
it? A Summer before
last, in 1880

Q What is the nature of the
bed of the river?

A In what respect

Q The material of the bed?
What is the formation?

A Rock and gravel

Q Red rock? A No

Q No bed-rock?

A Boulders, sand and gravel

Q Is there any bed-rock
clay there? A. At the falls
of course the bed rock comes
out.

Q Now during seasons of high
water what is about the ve-
locity of the water running
through that river?

A I could not tell you.

Q Between these points?

A Well, it is immense is it?

It is a torrent, isn't it?

A It is pretty swift

Q And the current is so
strong that it is almost resist-
less, is it not?

A Well, it all depends on
what is resisting it

Q Could a steam boat run
up such a current as that?

A A steam boat could not
go up there on account of
the rocks? Q I mean
for the water, assuming
that there would be no

Obstructions except the current?

A Of my own knowledge I do not know

Q Do you think it could be pulled up with an ordinary steam engine such as they have for railroad cars?

A If there was a railroad track there, you might pull it up

Q It would be a pretty strong pull, to pull anything up?

A I do not know about that

Q Is the fall greater below or above Cannon Creek

A I think it is that it was greater above

Q It is greater above Cannon Creek than below?

A Yes
Q How far up the Gold Run mine, does the material such as you see here in this lump, this large specimen, exist?

A I judge about 20 or 25 feet, but I do not consider that is an average specimen of that dirt

Q Your determination of that

question, depends upon the examination of it in the bank, does it not? A That is it

2. 20 or 25 feet. What kind of material do you have after you get above the 20 or 25 feet?

A Similar material but not so hard

2 And not so compact?

A Not so hard and compact

2. Are the rocks larger or smaller as you go up? A. There is a strata there with rocks very large.

2 What is that strata and where is it? A It is above, and above the bottom strata of the gravel. It is more rocky than that sample.

2 How much of that Cement would you say there is in that sample, in proportion to the amount of rock?

A Do you mean by weight or volume?

2 Volume?

A. It would be only an approximation. About 25%

Q. Is there not more than 60% of cement in that?

A. It is all cement

Q. I mean cement as distinguished from the rock contained in it?

A. What size do you wish to limit the rocks down to?

Q. I do not wish to set any size on the rocks. You see these specimens before you here. You say this is cement?

A. I say that 20% of that would be sand and gravel, not to exceed the size of a pea

Q. And not more than that?

A. I do not think so

Q. If you should find out there was over 60% in there you would believe that you were very greatly mistaken would you not?

A. If I found it out to be so, I would think I would be mistaken

Q. How did you make your estimate to determine that?

A. I judged that from an experiment I made myself

The whole mass gravel
would you not?

A I would call it gravel, yes.
Mr. Rhoder. What are the di-
mensions of that which
you call gravel. State it
so the Reporter can take it
down

Mr. Hart. About 4 inches in
length

A I would also consider a
gravel, that which would be
 $\frac{1}{2}$ an inch in diameter, and
I would consider a gravel
that the size of a pea

2 Now then after you get
a considerable distance above
this formation you find softer
material? A yes

2 What is it composed of that
softer material? A gravel

2 What else with the gravel?

A. Sand and sediment. Gravel,
rocks, sand and sediment

2. The chert found in the
upper or in the lower stratum

A They are generally found
in the lower stratum but

Q How did you make that
 Effluent? A I made it
 with a sieve. I took 100
 lbs of gravel and passed it
 through a sieve with 64 holes
 to the inch and twenty five
 per cent of it passed through
 and I should judge that
 gravel compares with
 this as far as the sand
 and rocks are concerned.

Q Very small pebbles do not
 go through your sieve?

A Nothing went through only
 what would pass through a
 hole $\frac{1}{8}$ of an inch square.

Q One eighth of an inch
 square?

A Yes.

Q What do you include in
 gravel as distinguished from
 sand?

A Rocks, pebbles,

Q How large would a rock
 be?

A This is a rock.

(indicating)

Q What do you call gravel
 a I call this gravel.

Q If it was considerably filled
 with sand, you would call

in some places they are in the top.

Q Sometimes you find them on top of the ground, and sometimes you find them in different parts of the soil?

A In different strata. You find some strata in the bank will be very rocky up some several feet from the bottom, 50 or 60 feet sometimes.

Q Did you ever get any stuff like this (Jones #2) from the Sawabill mine?

A Yes that resembles the material at Independence Hill.

Q That kind of material is to some extent common throughout the mountains is it not?

A The banks differ.

Q That is very common through the mountains, is it not, that kind of material?

A Yes.

Q This material marked (Gould No. 3) is also common in the mountains is it not?

A I would judge it is common.

Nearer the top.

I More common near the top
than No. 2. A I should
say so.

I saw high up do you think
No. 2 would be common there
A I cannot tell.

I What would be your judg-
ment? A I think that
gravel all belongs to what we
call the top bench, both of
them, but this would ap-
pear to be nearer the top
than that {indicator} and
more decomposed rock.

I I see high up do you think
that kind of gravel can be
found. I mean No. 2 -
that is how low down do
you think it can be found
A Do you mean at Goad
Run?

I Yes? A Well it might
extend down to the blue dirt
I down to this {indicator}
A No. The blue dirt that
overlies this.

I. You mean the blue.

dirt that overlies the Cement
A yes

Q How thick is the blue
dirt the stratum of
blue dirt that overlies
the Cement?

A I judge that at Gold
Run it is about sixty
feet.

Q Sixty feet deep?

A Yes.

Q There is none of that
in this Court room that
you have seen is there?

A I do not see any that
I could identify. it is
similar to this Cement
Only softer that is all
the difference.

Q Did you ever see any
of that blue dirt washed
A I did

Q When did you see it
washed?

A This particular dirt

Q No sir of the blue
dirt above that

A I have seen blue dirt

washed in several places.
 Q I mean in the Gold
 Run mine?

A I never was in the mine
 when they were washing

Q You were never in there?

A No sir nor when they
 were washing

Q Where did you see the
 blue dirt washed?

A I seen blue dirt washed
 at Dutch Flat in the
 Yankee Claim and other
 Claims at Dutch Flat but
 I do not recollect the names
 of them. I have seen it
 washed at the Orion Claim
 at Iowa Hill and at the
 Morning Star and across
 the Canyon from Iowa
 Hill - similar blue dirt
 in appearance to that

Q That is to that which
 is washed out of the Gold
 Run?

A Similar to this sample

Q That is number one of
 Mr Goulds I think, how

do they manage to wash
Material like Sample
Number one?

A They disintegrate it by
blasting.

Q Where is the gold found

A All through the gravel

Q All through this Cement?

A Yes.

Q And the process is to
Crush that Cement and
wash the gold out?

A That is the process

Q When the Cement is
Crushed it forms sand
does it not?

A It does.

Q Hydraulic Mining done
in a workmanlike manner
in that kind of Material
would necessarily result in
the crushing of a large
proportion of the sediment?

A There is a large proportion
Crushed.

Q And formed into sand?

Mr Byrne He did not say
that.

Mr Harr That is a fact
 is it? Did you not say
 that is formed into sand
 A That is the particles are
 separated, it is disintegrated
 Q A greater portion of that
 is sand when it is sepa-
 rated is it not?

A of this material here?

Q Of the Cement?

A What Cement are you
 speaking of?

Q This Cement?

A The cement between the
 stones?

Q Yes?

A Yes it is composed of
 sand and small pebbles

Q The small pebbles in that
 Cement are not in greater
 proportions than one to
 one hundred are they?

A I have never counted
 them I do not know

Q I mean a greater prop-
 ortion in bulk?

A I do not know anything
 about that.

Q You do not know anything about that?

A No sir I do not know anything about the amount. I could not say. I never counted them or separated them and I could not tell you.

Q And therefore you could not make an estimate, do you think an actual count of the pebbles would be necessary in order to make an estimate?

A Well I think it would have to be passed through sieves of different sizes to make the estimate exactly or near right.

Q Where is the greater proportion of sand to be found?

A On top.

Q On the top of the plain?

A Yes

Q So that there is more sand on the top of the plain than there is in

this sandy formation which you call Cement?

A Yes.

Q How much more sand is there on top than there is in this Cement?

A Well there is a larger proportion of sand a larger percentage of sand

Q Well what would you say how much greater percentage?

A I could not tell you but it is greater. That is evident from these samples which you have before you here.

Q When you were farming your place up there did you think it was particularly desirable to get any of this Cement on your place in this integrated form?

A I do not think any of it gets there.

Q I know but if it got there do you think it would be desirable to have

it on your farm?

A. I do not think it would be injurious.

Q Did you ever try it?

A No sir

Q Are you under the impression that anything would grow in that kind of stuff?

A If it was properly decomposed and disintegrated it would grow in it of course.

Q What is that formation?

A It now represents sand stone.

Q What is that formation. is it vegetable or mineral?

A It is mineral of course.

Q Do vegetables grow in minerals?

A Yes.

Q In what kind?

A The earth

Q The earth then is mineral? A Yes

Q Is that a sedimentary formation?

A The theory is that it was deposited by water.

Q Did you ever try to grow anything in that kind of stuff?

A I never tried to cultivate anything in cemented blue gravel.

Q Did you ever see any of this cement, not cemented blue gravel, did you ever see any of it that was properly decomposed for the purpose of cultivation?

A No sir not to my knowledge

Q How many years do you think it would take for that kind of material to decompose so as to make good soil for the purpose of cultivation?

A Well I have seen some of it that has been out of the ground 20 years and has not decomposed.

Q It had not decomposed

A No sir

Q You think if it had

plenty of time to decompose
 it would make good soil)
 A It might, I think all
 the elements of good soil
 are in it.

Q What do you think are
 the elements of good soil?
 A Silica Alumina lime
 Magnesia Iron and other
 substances.

Q They are all good elements
 for proper soil for the
 purpose of cultivation?
 A Yes.

Q For the raising of wheat
 and fruit? A Yes.

Q What is silica?

A It is quartz commonly
 speaking.

Q Taken alone would it
 make good soil?

A A portion of it mixed
 with other soil.

Q Does it contain any
 vegetable matter?

A It does not contain any
 organic matter.

Q It would be of no

account when alone it contains nothing within itself that would tend to increase the growth of vegetable matter does it?
 A. Sand alone. Clean sand sand alone.

Q I mean what you call silica? A Yes, I have seen hop fields planted on sand right near the American River here the principal percentage of which is silica.

Q Hop fields are the only thing that will live in soil like that?

A Willows will grow in it and wheat. The sand plains in the Sacramento Valley are principally composed of silicious matter.

Q Which sand plains do you refer to when you say the sand plains in this valley. When did you investigate this first to find that out?

A I never made an analysis of that particular soil to find. I know from my common sense view, I know that sandy soil is principally composed of silica.

Q Yes but are those sandy soils?

A Yes I have seen them sandy.

Q There is some sand in all soils, but are these what you call sand plains out here in the Sacramento valley?

A Yes.

Q Name one sand plain in the Sacramento valley that is not the result of hydraulic mining just one.

A There is one over here on Putah Creek.

Q That is sand that came down from the mountains?

A Yes.

Q What other place

A I suppose all the sand

in this valley came down
from the mountains at one
time or another.

Q Name one sand plain?
A There is sand between
Stockton and some other
station on the Rail Road
I do not know the name.
Q There is a little sand
there?

A No sir Considerable
The Livermore valley —
Q [Interrupting] Do you
consider the soil of the
Sacramento Valley a sand
plain?

A The Livermore Valley
is composed of pebbles sand
and some

Q Do you call the red
soil of the Sacramento
Valley a sand plain?
A No sir I do not nor
the red soil I do not.

Q Do you call the black
adobe of the Sacramento
Valley a sand plain.
A No sir.

Q Is that not principally
the soil of which the
Sacramento Valley is made
up. either of red soil or
of black adobe?

A Some places they are
and some places they
are not

Q When are they not either
of one or the other of those
two Characters of soil?

The Court I do not think
it is necessary to consume
much time on this.

Q Where is the sand plain
between here and Stockton
A It is in the line of the
Rail Road. I did not
say it was between here
and Stockton.

Q Where?

A Between Stockton & Martinez

Q Where is it?

A On the line of the
Rail Road?

Q That is on the bay,
that is in the beach?

A No sir it is not near

the bay. I cannot recollect the names of the stations Or else I could tell you between what stations it is I cannot recollect the names of the stations.

Q How far is that from the bay of San Francisco, but that is immaterial and I shall not press it, now you say that a great deal of natural wash comes down in the mountain streams?

A I do.

Q And how do you determine that?

A I have noticed particularly the amount of deposit that forms in the Reservoirs.

Q What are those reservoirs?

A They are large reservoirs for storing water for mining purposes.

Q And that stuff settles in the Reservoirs and stays there?

A It does

Q How large are any of these reservoirs - any one that you might mention

A I could not exactly tell the exact area. One has an area - the Iowa Hill Canal Companies has an area of 20 or 30 acres somewhere along there.

Q How long has that reservoir been there where it is now?

A I believe since 1872.

Q Since 1872?

A Yes.

Q What kind of soil goes into them and settles?

A Yellowish Colored sediment.

Q How do you catch the water in those reservoirs how do you get it?

A From the natural water shed of the Country

Q You let it run in there?

A It runs down the mountains and into the reservoirs.

Q And you stop the whole thing there?

A We stop the whole thing right there.

Q Now then if you were to build a reservoir of that kind right below the mine of the Gold Run Company how long do you think it would take it to fill 100 feet with sand and sediment and other matter?

A That would depend on how far the below the Gold Run mine the reservoir would be built.

Q Well put it where it would catch the amount that is drained into the River?

A Well it would just require an amount equal to the cubic contents of the dam.

Q It will fill up as high as the dam?

A Yes.

Q In a year or two?

A In How long.

Q In a year or two?

A That would depend on the Capacity of the Reservoir.

Q Well if it was 30 Acres. it would fill in 30 acres in a year wouldn't it more than 15 feet deep?

A If it had equal Cubic Contents it would if the gravel was put into it in that time.

Q Where did you say this red soil comes from?

A It comes from the Surrounding hills.

Q There is a mine above there and has been ever since 1872 is there not?

A Not above this Reservoir

Q Where is this Reservoir?

A It is at an altitude of 4000 feet and about eight miles east of Iowa Hill.

Q And it has filled how many feet in nine years?

A From one to four feet.

Q Thirty acres has filled from one to four feet in nine years. Catching the whole watershed there - is that so?

A The watershed is very small there.

Q How large is it?

A Approximately 15 or 20 square miles but not to exceed that.

Q When was that reservoir constructed?

A I think about 1872.

Q Are you certain about that?

A I am not positive about that.

Q When was it last used?

A Last winter, and it has been used ever since.

Q How far is that from Auburn?

A Nearly 40 miles from Auburn.

Q In what direction?

A East

Q How far is it from the Rail Road?

A It might be 8 or 10 miles in an air line I cannot tell exactly.

Q When the water was brought in there it was stopped still so that all the sediment settled was in Nor?

A It does not settle all.

Q Why

A I cannot tell you why it was in suspension

Q How long does the water stand in the Reservoir?

A Sometimes a month that is portions of it.

Q So that you catch the heavier part of all the sediment?

A The heavier part is caught.

Q Still there are fine particles in the water

A The water is strongly

Colored when it comes
down to the mines

Q How much of that stuff
does it take to color
the water?

A I could not tell you
Q It is like throwing
some paint into it — it
simply paints or colors
the water — The finer ma-
terial remains near the
top of the water while it
is running, the lighter
material.

A That lighter material
is of a red color,

Q And a very slight amount
of it colors the water does
it not?

A I do not comprehend
your question

Q A very slight amount
of that light material on
the top of the water will
color the water will it not?

A If you mean that there
is just a film floating on
the top, no

Q I do not mean that, I say a very slight amount of that material will color the water?

A I do not know what amount it will take to color it.

Q One cubic yard of that kind of stuff will color a given quantity of water more than 150 cubic yards of sand will it not and it will be more visible to the naked eye as it runs along through the stream?

A I never made any experiment on that

Q Is it not a fact simply as a common sense proposition? A I do not know that it is a fact.

Q Can you by standing by a stream and looking at its color determine how much comes from the top washings as compared with the amount of sand

from the lower washings
that is rolling along in
the stream and running
in the lower parts of the
stream - in the deeper
parts?

A Well if I saw a stream
coming down above the
mine that looked as
thick before it came to
the mine as it did when
it got past, I would
judge that there was as
much material if not
more coming from above
in proportion to the amount
of water used.

O I ask you whether
or not you can make
any reasonable intelligent
estimate as to the comparative
amount of sand and sediment
in a stream from looking
at it?

A No Sir I do not think
I can make any estimate
by looking at it. I do
not pretend to say that.

Q I will ask you another thing; if the sediment that comes from the top washings was sufficient to completely color the water before it came to the mine could you then tell whether or not sand had been put into the water by the mine as it passed along without experimenting?

A I cannot comprehend your question general.
(The Reporter read the question)

A I could not.

Q You could not tell whether sand had been put in?

A No sir.

Q So that your judgement as to whether or not muddy water is carrying sand is not worth anything unless you experiment?

A You can take it for what it is worth.

Q Is it worth anything?

A I think it is.

Q Can you look into muddy water and tell whether or not there is sand below the surface of the water running through it?

A No sir

Q Then your judgement on that question is not worth anything?

A As to the amount of sand I could not tell without experimenting.

Q I ask you whether or not you could look into muddy water that is made muddy by the red soil of the mountains and tell whether or not any sand is in the water without experimenting?

Mr Belcher He has already answered that question

Mr Hort. Mr Hopson What kind of sediment do you put in your soil as a fertilizer?
A Sediment from the Bear

River ditch

Q Was it sand?

A There was some sand in it

Q Was it sand or was it what you call sediment?

A It was very fine silicious matter - silt - very fine.

Q How far was that from where it was taken out of Bear River

A I could not tell the length of the ditch.

Q Where did your water come from?

A From Bear River

Q Well what part of Bear River

A I do not know the point of diversion.

Q What was the color of the water?

A Yellow.

Q What was the color of the soil it deposited

A Yellow soil.

Q And not white sand?

A No

Q Do you know what

Slickens is }

A I do not know the definition of slickens.

Q Do you know what kind of soil makes slickens?

A The material that comes down the Bear River ditch resembles what they call slickens.

Q In color?

A In color,

Q Did the ditch run through the top soil?

A It did.

Q It did run through the top soil?

A Yes.

Q And this particular soil that you got there was good and improved your land?

A It did.

Q What kind of land did you have there

A A kind of clay soil in places and in places light red loam.

Q And in some places bed rock was it not?

A Yes

Q This stuff did make the bed rock produce more than it would have produced had it not been there?

A I did not put it in the bed rock.

Q How deep was it in your land there?

A All the way from a foot to two foot and a half some places deeper?

Q That kind of soil is made more productive by increasing its depth and it is made also more lasting is it not?

A It is made better by plowing this material into it

Q Suppose you put this material on to it 16 or 18 feet in depth did you ever test it to see whether or not it would produce?

A I have cultivated it where it was ten feet in depth.

Q Where was that?

A At my ranch above Auburn.

Q What kind of a place did you have?

A It was a reservoir bottom.

Q A reservoir bottom?

A Yes

Q How long had the material been there?

A It had been used a year prior to the time that I cut the dam and drained it.

Q And the material had been in the bottom of the reservoir there for some time had it not?

A It was perfect slum the year before I drained it.

Q After you drained it you say you cultivated it and raised good vegetables on it

A Yes after it was drained.

Q That slum came there from where?

A It came from the Bear River ditch

Q Where does the Bear River
ditch Come from?

A It Comes from Bear River.

Q Where does Bear River
Come from?

A It Comes from the Mountains

Q What part of the Mountains.

A Towards the Summit some-
where I have not been up on
Bear River.

Q You do not know from
what part of the Country
this stuff Come from?

A No sir I could not tell
you from what particular
part of the Country it
Come from.

Q I understood you to say
it Come from Dutch Flat?

A Some of it might have
Come from that direction?

Q I understood you to say
it All Come from Dutch Flat?

A No sir I did not say
Anything of the Kind.

Q You did not say that?

A No sir

Q Did not you say in

Answer to Mr Byrne when
 He asked you where it came
 from say that you believed
 that it came from Dutch Flat }
 A I might have said that
 the water - some of the water
 came from Dutch Flat but I
 did not say all.

Q I mean the sediments
 that you cultivated?

A No sir I do not want
 to be understood that way -
 that it all came from there
 I did not say that.

Q The soil which you say
 increased the productiveness
 of your soil was of the top
 washings was it not?

A I do not know.

Q That is your opinion
 is it not?

A I do not know.

Q Have not you an opinion
 on that subject?

A No sir I have not
 visited the mines that
 tail into Bear River
 other than at Dutch Flat.

Q It was the Character of the top washings in your district?

A They were washing on the bottom at Dutch Flats.

Q It was the Character of the top washings in that district was it not?

A Which?

Q The soil that was deposited on your land?

A No sir it was not.

Q It was not of the Character of the top washings in that district?

A No sir.

Q Was it blue gravel?

A No sir.

Q It was not blue gravel?

A I do not know what it was.

Q It was a yellow sediment?

A It was a yellowish sediment.

Q What would you consider to be its parts its elements - the elements of that soil?

A Well I would consider it the largest percentage of it

was silica.

Q And what other elements?

A Alumina and Magnesia

I do not know the percentage
I judge from the Character
of the Material.

Q That is very much like
the top soil of the mountains?

A It is similar to the top
soil of all Countries

Q You mean to testify that
that can be cultivated and
will produce? A I do positively.

Q Do you mean to testify or be
understood as testifying that blue
gravel and sand when thrown in
great quantities over land increases
its productive qualities?

A I have never seen any thrown
over land in that way for
that purpose

Q Do you mean to testify
directly or inferentially that
it would increase the productive
qualities of land?

A Do you mean this material
here?

Q. I mean the blue gravel and sand? A. That would depend upon the character of the soil, I think

Q. How? A. That would depend altogether upon the character of the soil. Sand might improve it

Q. If it is good soil, do you mean to say that blue gravel and sand thrown over land 15 feet will increase its productive quality?

A. I do not think this specimen here would be considered as a fertilizer in its present condition

Q. Do you think that sand thrown 10 or 15 feet in depth over land, is a fertilizer anyway? A. It all depends upon what kind of land it is, and what it is used for. I have seen pretty good gardens in San Francisco, on sand, all sand

Q. There is no question of that after it has been cultivated and manured. Don't you know that throwing that kind of stuff over land does absolutely injure it? A. I do not.

Q. You do not know anything about that, do you? A. I answered your question.

Q. Do you know anything about it?

A. About what? I answered your question that you asked me first.

Q. Answer the one that I asked you second?

A. Do I know anything about what?

The Reporter read the question.

A. I would not consider that a layer of boulders spread over the land would improve it.

Q. Nor of sand either?

A. In some cases I would

consider that sand was good

Q. From one to fifteen feet in depth?

A. If I would be the one that was spreading it out on the land, I would be the judge of the depth

Q. But if someone else was spreading it on, then you would not be the judge, I suppose? Now, you say that the natural wash comes from the roads in that district? What is the length of the roads in that district?

A. I never chained them, and never measured them

Q. If you should wash these roads off for sixteen feet deep from one end to the other, they would not make enough sand to fill the deposits, or to make up the deposits immediately opposite the town of Sacramento

on the American River?

A. I think it would. It would astonish you if you would figure it up.

Q. Do you think it would?

A. Should what?

The Reporter read the question.

A. I do not know anything about the quantity of deposits in the Sacramento River.

Q. Are there a thousand miles of roads in that country which is drained into the American River?

A. I do not think there is quite a thousand miles.

Q. What do you think there is? A. I told you I had never measured them.

Q. What is your estimate of them? Is there any considerable amount of travel upon the public roads in that country?

A. There is considerable.

Q. Does the Dutch Flat road from Alta to Dutch Flat, form a specimen

of the roads that are washed in that country?

A. Do you mean the wagon road?

Q. Yes? A. I have never been on the wagon road

Q. Can you mention any place on these roads where they have been washed out to a depth exceeding three feet for any considerable distance? A. Yes

Q. Where? A. The road leading from Monono that

Q. Where to? A. To Damascus

Q. How far? A. There is a mile of it washed deeper than three feet

Q. How deep? A. It will average five

Q. The average is five feet in depth, and how wide?

A. The road bed is about ten feet

Q. That is, the part that has been washed? A. And then it slopes from that

Q. Can you mention any

other considerable washings?

A. All the roads that I have seen while travelling in the mountains have washed to a greater or less extent.

Q. And all the roads that you have seen in the valleys have washed to a greater ^{or} less extent, have they? A. No sir, I cannot say that.

Q. From the streets in the cities to the country roads?

A. They all are liable to wash, of course.

Q. How do you know they are all washed to a greater or less extent?

A. Those that I have been over I have seen it. I have noticed it.

Q. What do you mean by a greater or less extent, what do you mean by that?

A. I mean this! In places where there is nothing but rock, the wheels of the wagons grind the rock, and the

horses' hoofs break off the rock, and grind it during the Summer, and in the Winter during the winter rains, this material is washed out leaving the rock bare again.

Q. But that is a very slight amount. Six inches in ten years would be a very deep wash in such a place as that?

A. Where the road beds are in soil, it moves to greater extent.

Q. Six inches in ten years would be a pretty good wash, would it not?

A. I never measured it.

Q. Is not the greater proportion of the country that is, are not the greater portion of the roads in that country composed of ^{bed} rock, to a large extent?

A. They are not.

Q. How far are they from the bed rock?

A Sometimes 200 and sometimes 1000 feet, and sometimes a few feet

Q. And sometimes on the bed rock? A. On the bed rock - very little of the roads are on the bed rock

Q. Is not the bed rock very close to the top of the soil in those mountains - hard pan? A. Which mountains do you mean?

Q. In these mountains up there, that form the basin of the American River? Is not the hard pan very close to the top of the ground? A. I never seen any hard pan up there

Q. Bed rock then?

A. In places it is ^{very} close

Q. In most of the places too, is it not? The greater part of the area is composed of bed rock, is it not? A. The greater part?

Q. Yes A. No sir

Q. What proportion?

A The greater part is covered by these deposits of gravel, and the overlying cement, sedimentary deposits, and finally soil.

Q. When you find that there has been natural wash, how ^{do} do these washings come - do they come down in little gutters?

A They wash out into little ravines.

Q. Little gutters upon the mountain side?

A. Yes, little gullies.

Q. Such as there are in all mountains. Is not nearly all of that country thickly covered with timber? A. It is not what I consider thickly timbered.

Q. There is brush there, is there not?

A In some places -
Q. Chimise and chapparel bushes? A I do not know what chimise is?

Mr Belcher It does not grow there.

Mr Hart Sage brush grows there?

A. I never seen any sage brush in my life to know it.

Q. What is the low under brush that grows on those mountains?

A. It is called there thorn brush principally.

Q. Does that grow in large patches? A. In places it does.

Q. Is not the greater proportion of those mountains covered with under brush and trees?

A. The greater portion?

Q. Yes. A No sir, it is the other way. There is a larger portion not covered by trees or under brush.

Q. Where is that large proportion that is not covered by trees and

underbrush? A Different places all through the country there

Q. Is that the true of that country about Dutch Flat Alta and Colfax?

A. About Dutch Flat?

Q. Yes A In some places about Auburn there is more brush than there is above

Q. Take for instance Blue Cañon? A. I have never been down to Blue Cañon

Q. Alta? A I have been at Alta

Q. How is it there?

A The brush is not very thick there. It was not when I was there

Q. Are there any trees there? A Yes, there are some

Q. You cannot see 100 yards from Alta can you, except you look up and down the

railroad? A Yes, I can see clear across to Damascus, I can see Alta from Damascus, and vice versa.

Q, I am speaking of where the ground is level, and not so high that you can see across the trees. Are there not immense forests of trees there? A No sir, there not immense forests of trees there

Q, A few? A It is not a thickly timbered country but there is timber there

Q, How does it compare with the Sacramento Valley? There are 3000 trees there, to where there is one in this valley. Would not that be a fair proportion?

A I do not know anything about that

Q, Do you estimate large wooded countries, as you estimate grades? 100 feet for a small grade, and

100 trees to an acre for a small covering of trees. How do you estimate them up in the mountains?

A I think you would be very lucky up there if you found an average of 3 trees to the acre taking the country all through.

2. Are there any other large scopes of country there - areas of country there where you have no trees? A There are some trees scattered pretty much all over it.

2. That country up there if it was in the valley would be called a forest, wouldn't it? The whole country? A I do not think it would be called a forest.

Recess until 2 o'clock

In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California v.s. The Gold Run Ditch and Mining Company	} Afternoon Session Saturday Dec. 17 th 1881
--	---

Transcript of Testimony
Volume

Index

John B. Hobson	Cross-ex, resumed	6543
	re-direct	6574
	re-cross	6596
H. L. Noyes	recalled - direct	6612
	Cross-Ex.	6614
Albert Stalen	direct	6628
	Cross-Ex	6681

Winfield J. Davis
Official Reporter

In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California	} Afternoon Session Saturday Dec 17 th 81
vs.	
The Gold Run Ditch and Mining Company	

Testimony
of John B. Hobson
Cross-examination Resumed

Mr. Hart In irrigating your
land from what did you
take the water?

A From the Bear River
Ditch

Q. From the ditch? A Yes

Q. Before it reaches the
sluices, before it reaches
the reservoir?

A What reservoir do you

have reference to, General?

Q. Is not there a reservoir into which that ditch runs near your place - near Auburn or Dutch Flat? A. Not that I know of.

Q. There is no reservoir there? A. Not that I know of.

Q. You took it out of the ditch? A. Yes.

Q. And that ditch is carried on to where?

A. To Auburn.

Q. What is done with it there? A. It is distributed from Auburn to other points between the north fork of the American River and Bear River.

Q. For what purpose?

A. For irrigation and mining.

Q. Mining purposes and irrigation? A. Yes.

Q. The greater portion of it is distributed for mining purposes?

A at the present time
for irrigating purposes

Q. No, I mean when the
mines are running?

A Yes

Q. To what mines is it
distributed? A Now?

Q. I mean when the mines
are running? During the
mining season?

A I could not state what
mines are using it at the
present time

Q. Can you state what
mines do use it when
they are mining?

A There is one Hydraulic
Mine called the Yankee Hill
mine, I believe

Q. Any others? A And an-
other one below but I do
not know exactly its loca-
tion

Q Where is the Yankee
Hill Mine? A The Yankee
Hill Mine is between the
railroad and the American
River

Q. How far from Gold Run?

A It is below Newcastle

Q. It is below Gold Run also? A Below Gold Run

Q. Does it dump into the American River?

A I could not answer that question

Q. It dumps into a tributary of the American River does it not? A That I cannot answer

Q. What does it dump into?

A Into a ravine

Q. Is there any other river of which that ravine might be a tributary? A I could not answer that question

Q. You do not know of any do you? A No sir

Q. How far down the river does this torrent that you speak of continue during times of high water?

A I have seen high water at the North Fork Bridge

Q. Have you seen it below there?

A Not a torrent, no sir

Q. As far down the river as you have seen it it continues to be a very swift torrent?

A During high water freshets

Q. Do you know the velocity of the river?

A I do not

Q. Have you any idea of the velocity of the river?

A. I have never investigated that question

Q. Do you know how fast a river must run in order to carry sand and light material?

A I do not

Q. Do you know whether or not it is sufficiently swift to carry sand and light material there in times of a freshet?

A During high water—that is during a freshet, a large amount of material might be carried in

suspension

2. Don't you know that the ~~the~~ torrent that you spoke of there, will carry a large amount of material that will be caught by it? A I do not know it from seeing it

2. You do not know whether it will or not?

A I have never seen it carrying it

2. Now you do not know how far it will carry it?

A I do not

2. How much will your sluice carry?

A My sluice is not a river

2. How much will your sluice carry? I did not say it was a river?

A I could not tell. I have never tried

2. Have you not said that it would carry stones weighing 1,000 pounds?

A Yes

Q. Is your sluice any swifter than the river?

A. I think it must be

Q. How much of a fall does your sluice have to the mile? A. I have never calculated it as to the mile

Q. Why do you think it must be, then?

A. Must be what?

Q. Swifter than the river, If you did not calculate its fall, why do you say it must be swifter than the river?

A. I merely guessed at that, I merely supposed that the river had not the amount of grade that that has

Q. You merely guessed at that? A. Yes

Q. You do not know the comparative velocity of those two streams?

A. I know this fact that it has more grade than the river between Rices

Bridge and Warners' Bridge

Q Do you know that it has more grade than the river has, as an average?

A Yes

Q From its source to where ^{its} spouts out of the mountains?

What is the grade of your sluice then? A An inch to a foot

Q That would make how many inches to the mile?

A 5280

Q Inches? A Yes

Q How much would that make in feet?

A I cannot calculate it mentally

Q You cannot calculate it in your mind?

A No sir

Q Do you know what the grade of the river is between those two points?

A I do, approximately by the barometer

Q Well, what is the grade of the river, by the barometer?

A 326 feet between Rice's Bridge and Cañon Creek

Q. And what is the grade of your flume to the mile?

A The grade of our sluice per mile would be 440 feet

Q. Do you mean to testify that the water in your sluice runs swifter than in the river during times of high water?

A Yes I presume it does

Q. From what fact do you so testify?

A It has a greater grade

Q. Does it depend entirely on the grade? A. Principally it does

Q. How deep is the water in your sluice?

A I have never measured it

Q. What would be your estimate? A Clear water?

Q. Yes. A I have never estimated or measured it

Q. It is not over a foot is it?

A Clear water?

Q. Yes. A. I do not think it is over two inches

Q. How deep is the water in the river during times of high water?

A. The last freshet of high water left mark about 12 feet above the present bed of the river

Q. Twelve feet above the present bed of the river?

A. Yes

Q. Does the depth of the ^{water} ~~river~~ have anything to do with the velocity with which it runs?

A. If I recollect right, according to theoretical formulas, it does

Q. You say that according to theoretical calculations and formulas, it does? Is it not an absolute fact that is demonstrated by experience of every man who has seen water running, that the velocity of the

water depends largely on the depth of the water?

A I do not know, I cannot answer that question

Q, Do you know by what rule the velocity of water is calculated on a given grade? A. I cannot recollect now, I know there are rules layed down

Q, It ~~is~~ very much larger as the volume of water increases in height, is it not? A I do not recollect the exact formulas. I know there are formulas laid down

Q, Is not that necessarily so from the fact that the pressure is greater when the water is deeper?

A I cannot answer that

Q, And hence you cannot calculate or give any reasonable estimate as to the velocity of the water in the river as compared with the velocity of the

water in the flume?

A I do not know anything about the velocity of the river as compared to my flume

Q. Without knowing anything about the velocity of the water in the river, can you tell anything about what it will carry in the way of material in suspension?

A I believe I testified that I did not know how much material it did carry in suspension

Q. Nor how much it would carry? A No sir

Q. Nor how far it would carry it? A No sir

Q. You say you have made an estimate or a partial estimate of the amount of money taken out of the mines on the north fork of the American River? A Yes

Q. From what did you

make that estimate?

A From data that I considered reliable that was furnished me

Q Where did you get your data? A From parties that worked in the mines or owned in them

Q Are you willing to swear to the facts upon which you base your estimates? A Some of them I am

Q Which ones are you willing to swear to?

A The mine which I have myself worked

Q And that only?

A And also some of the later workings of the Mountain Gate Mine at Damascus?

Q How can you swear to the data upon which you make your calculation there? A I measured the ground that was worked, and saw the amount of gold that was taken weighed. ~~Q How do you know that that amount was taken~~

Q. Do you know what amount of gold was taken out?

A. I have seen the most of it washed out of the sluices.

Q. But some that you did not, can you estimate the amount by simply seeing some of the gold that is washed out?

The Court. He said that he saw it weighed.

Mr. Hart. I know he ^{saw} it weighed but he did not see it all washed out. How do you know it was all washed out?

A. Well, there was some left in there that was not washed out.

Q. But the portion that you saw weighed, did you see it washed out? A. I did.

Q. How do you know the number of cubic yards for which that was taken?

A. I measured the ground.

Q. You measured the ground - did you see it washed out - the ground actually washed

antⁿ. Q Mr. I did not
see the ground actually wash-
ed out

I How do you know the
number of cubic yards
from which that was washed
A I could judge that as a
mine by prospecting the
ground

Q I know you judged as
a mine. But how do you
know the amount in cubic
yards from which that gold
was washed? A The ground
is blocked out almost square
and can be easily measured.

Q How do you know the
number of cubic yards from
which that gold was washed,
was taken from the ground
that was blocked out?

A There was no other
place in which they were
mining

Q No other place in which
they were mining?

A No other place in the mine

Q No other pits there,

Either? A No.

Q No water in the tunnel?

A No.

Q No nothing? A No

Q. Was that when they first commenced mining there?

A Oh no.

Q. How many cubic yards had they washed out of that mine at the time you saw that measurement made or made this inspection?

A Well, there was a large number of cubic yards washed out

Q Had been washed out?

A Yes sir

Q How long? A They have been washing out of that mine ever since 1854

Q Has you seen it washing ever since 1854?

A. Oh no

Q How do you know that the number of cubic yards from whence they had washed this gold —

A. I am talking out of

a particular breast

Q How do you know that the number of cubic yards that you measured or saw measured had been washed from that particular breast?

A I believe it was washed from that

I believe it and you got it from hearing others?

A I did not get it from hearsay

Q Whom did you get it from and how did you get it?

A I have been in the mine several times to make measurements with different parties

Q How did you know you can explain to us? That is not explanation to me, how did you know the number of cubic yards, from which that goes was washed?

A By measurement

Q What did you measure

A I measured the place from which it was taken out.

Q Did you know absolutely

That it was taken out from that place? A Must undoubtedly I say.

I know and you know it?

A Because I made the measurement of the ground that was removed before that time

I And then you measured the ground that was removed at that time? A Yes sir.

I That is the way you found it out? A Yes sir, I consider it reliable

I You consider it reliable and you are willing to swear positively that that dirt was not any of it washed from any other place, excepting that part that you measured? A No, I

would not swear positively to any such thing as a fact

I. Why couldn't you - you saw it done and made the measurement, why couldn't ^{you} swear to it

A There might some dirt have slid in from the

Side hills, the Cañon.

I know do you know, didn't you see the washing done?

A Yes sir I did

I you saw it right out of the bank didn't you?

A Yes sir; then might have been some waste dirt taken out of the tunnel I would not swear positively

I know do you know the facts upon which you make your calculation as to the Colver mine? A That is from what I have been told by parties that owned the mine.

I That is hearsay?

A That is hearsay

I know do you know the amount for which you have made the Shelby mine?

A That is also from hearsay

I know do you know the exact data upon which you make your calculation as to the Columbus mine?

A That was also the same

I Hensen? a Yes sir
 I show do you get the date
 upon which you make your
 calculation as to the Phillips
 mine? a The same

I have ^{you} do you get the data
 upon which you make your
 calculation as to the
 Morning Star mine?

a That is the same

I Where do you get your data
 from which you make your
 calculation as to the Bird's Eye
 mine? a all the same

I And the Strawberry mine?

a The same

I And the Cross onson Hill
 mine? a The same

I And the Gully flat mine?

a The same

I And the Greber flat mine?

a That is the same

I And the Independence Hill
 mine? a I worked that

mine myself

I All of it? a Not all
 of it

I Well how do you make

your calculation as to that?
 A As to the amount?

2. Well, \$100.000?

A A portion of that is from
 the original owner, what
 they have told me, that
 they took out that much
 money before we went there
 I that was hearsay?

A Yes sir

2 How do you know about
 the North Star ground?

A That is also from Hearsay
 2 And the Webster mine?

A That is also from Hearsay
 2. Another Down Hill mine?

A Hearsay

2 That is all Hearsay is it?

A Yes sir

2. How do you know in
 relation to the Whiskey Hill
 mine?

A. I am an
 owner in that mine?

A You are an owner in
 that mine? A Yes sir

2 Now I will ^{ask} you whether
 or not you have any direct
 interest in the result of

Ans' certainly?

A 'A direct interest?

2 Yes sir? A I do not see that I have

I will ask you whether or not you are an owner of mines in the Goose Run Range? A I am not

I will ask you whether or not you are an owner in the Excelsior mine?

A I am not

I have long since ceased to be an owner in that mine?

A In the Excelsior?

2 Yes sir?

Mr. Belcher Do you say that as immaterial

A I never was an owner in it

Mr. Hart: How did you determine the attitude or height of the different Embankment in these several mines in making your calculations as to the cubic contents of the pit

A I dropped a tape line over the bank

Q In each instance?

A In each instance

Q You got on top and dropped a tape line down? A I did

Q Did you drop a tape line down the top of the Great Run mine? A I did

Q Now in speaking of Indian Ravine I believe it is, how far is - did you ever go down the Cañon? A I did

Q How far? A I went down to what is called Stempler's tunnel

Q Is there a sluice down near the mouth of the Cañon

A I was never at the mouth of the Cañon

Q Is there a sluice within a mile and a half, that you know of? A I have never been down below

Q Or three miles from the mouth

A Yes sir, there is a sluice I think three miles from the mouth

Q About three miles from the mouth? A Yes sir

Q Did you ever go to that Shuce?

A I did

Q How far is that Shuce below the Suspension bridge?

A (referring) It is in the neighborhood of two miles

Q In the neighborhood of two miles from the Shuce to the Suspension bridge? A I think so

Q And about 3 miles from the Shuce to the mouth of the Cañon about 3 miles from the Shuce to the point where the Cañon joins the North Fork?

A I told you I do not know the distance

Q Why don't you know the distance? A Because I do not know it

Q Never have been over it.

Q How far is it from the dam you spoke of this morning to this Shuce? A Which dam do you refer to

Q The dam made by the putting of taulings from the Orion Claim?

A These are 2 dams that were put in by

that company

How far is it from there
to the sluice? A From the
lower one I think it is about
a mile and a half

I And the other?

A The other is a mile and
three quarters probably.

I A mile and three quarters.
What is the nature of that
river from the dam to the sluice?

A The river?

I The creek? A It is
tolerably flat

I How? A It is filled
with tailings

I How much filled with
tailings?

Mr Belcher He has already
told about that in detail

A I could not tell you how
much it is filled with tail-
ings below that point.

Mr Hart. Don't you know
it ^{is} much cleared out there
of tailings at this time?

A I do not. I know dif-
ferent from that. That

There are a great many tailings
 I But you do not know
 how much tailings there are
 there? A There are a
 great many tailings there
 I That is a mile and a half
 Now what is the nature of the
 creek, from that point down
 to its mouth, for the three
 to its mouth

Mr. Belcher He has told you
 that he has not been there.
 I object to this repeating what
 he has asked several times
 before

Mr Hart. Is it not such, pre-
 cipitous from there to the
 mouth of the Cañon

Mr Belcher I object to that.
 He has been over the ground
 once and again in "crop-ex-
 amination"

The Court. If he knows he
 can state it

A I know that it was
 precipitous from the Cañon
 compared with under-currents

Mr Hart. What is that?

A It is precipitous, more
rather it is above

I And very precipitous is it
not? A Considerably so
down to Jempler. I am below
that I do not know anything
about it

I would it be safer for a
man to undertake to go from
the Shuei down to the mouth
in a skiff or boat?

A Well, I would not select
that kind of a ride in a skiff
for me

I Are there any tailings from
the Shuei to the mouth of
this Cañon? A Well, I
could not tell you because I
have not been there

I Don't you know from the
nature of the Cañon that it
is utterly impossible for any
tailings to be there?

A These might be flat places
in the Cañon below Jempler
I do not know whether there
are or not

I You have never examined

about it? A I have not.

2. You have stated today that the total yield of all the mines you mentioned was \$6,500,000? A Yes sir.

Q When did you state that as having been realized - between what times?

A Well, as I got the data it included the period extending from 1804 up to the present time.

Q Now that \$6,500,000 is a matter of hearsay, is it not? A I consider it -

Mr Belcher I object to that. He has gone over this in detail, first to one mine and then the next and so on through each one of them, and now he comes back going over the matter again.

The Court. It seems to me you have gone over before the whole thing, & then in detail and now you are going over the whole again. You asked him first how much

Earl mine asked and he has answered that.

Mr. Hart. I never asked him about the figure \$6,000,000. I do not want that to stand as testimony.

The Court. He can answer it (The question is repeated)

A Not all of it.

Mr. Hart. Is not that sum total a matter of hearsay whether or not that has been the total amount that has been realized?

A The total amount — not all of it.

Q I ask you whether or not that has been the sum total of all the mine, whether or not that is not a matter of hearsay.

The Court. He says not all of it —

A Not all of it.

Mr. Hart. Can you swear that \$6,000,000 has been realized, if that has not been a matter of hearsay?

A I cannot not swear to that
as I did not see or know positively

I can not swear to it, ²
A No sir, I cannot swear
positively to that which passed
through my hands

2 That is all?

A And that which I had
good reason to believe was
reliable

I do not count your belief?

A I swear positively to the
guilt of the Independence Bill
mice and the Whiskey still

2 That is all?

A That is all - General
I do not wish to be under-
stood that I swear to the
whole amount of the Inde-
pendence Bill, the \$100,000.
But I will swear to the a-
mount that I took out my-
self

Mr Byrne. Have you the
books of the old Independence
Company? A No sir, I
have not.

Mr. Hart. You spoke of Fowler
lumber business, as having
created a considerable amount
of dust in the road, up above
Dutch Flat. I will ask
whether or not Mr. Fowler
is one of the owners of the
Sage Hill Claim.

A I do not know that he is
I you know that he is the
President of that Company?

A No sir, I do not

I you know that as well as
you do these gentlemen that
you stated to Mr. Byrne
Mr. Belcher. I object to that.
Companion is not the thing
here

Mr. Hart. I want to know if
he does not know this ques-
tion as well as he knew the
question that were propounded
by Mr. Byrne which he an-
swered. It goes to show the
interest of the witness
(The question is not pressed)

}

Re-direct Examination of John B. Hobson

Mr. Byrne. You said you did not have any books showing the former yield of the Independence Hill ground?

A No sir, the owner of the mine told me the amount of gold he took out, that is two or three of the owners that have been working it.

I will measure you how the amount that you actually took out compared with the statement as to what was taken out before in relation to the quantity of ground worked.

Mr. Hart. I object to that upon the ground that the question is framed with a view of undertaking to sustain incompetent testimony. That is to sustain the mere Ex-parte statement of some person not a party

To this suit
The Court. I suppose you can
 ask him if he made any
 computation himself.

Mr Byrne I want to ascer-
 tain the basis of his knowl-
 edge. He states that a cer-
 tain amount of money had
 been taken out by him and
 I now ask him how that
 compares as to the amount of
 ground formerly worked.

The Court. You assume that
 he has made some comparison.
 You can ask him if he made
 any estimate of the amount
 taken out.

Mr. Byrne Did you make
 such an estimate, or did you
 arrive at the difference be-
 tween what you actually took
 out and the \$100,000. That
 you stated was taken out of
 that claim altogether?

A No sir. It was given to
 me it was no estimate.

Mr Hunt. I object to any
 testimony of a hearsay character

Mr. Byrne Did not you esti-
mate that? A I have
made no estimate about it,
as to a comparison of the ground

I you made no estimate by
way of comparison?

A No sir

I you were asked if you could
tell what the river would
carry during its flood, I now
ask you can you tell me
what it has actually car-
ried away from you and
what it has actually left
behind

Mr. Hart. I object to that
as not re-examination and
on further ground that wit-
ness states to my question
that he does not know.

Mr. Byrne Do you know what
actually remains behind in
the river there?

A I know that there has
been a heavy deposit of sand-
bars formed in the river

Mr. Hart. I object to that.

They went into that Exam-

- creation originally and they
should be held to the same
The Court. I think you went
into that

Mr Byrne Otis' statement has
been attacked and its value
ought to be diminished

The Court. It will not strength-
en it any to repeat it

Mr Byrne What is the differ-
ence between the carrying ca-
pacity in proportion to the
amount of water run, of a
shut having a 12 inch grade
and a river having less grade

Mr Hunt I object to that
on the ground that the witness
has stated that he is not
know he is not a competent wit-
ness

Mr Byrne The witness has
sworn that it was very
rapid or cross-examination,
that large boulders went out
of that shut and then it
was sought to make him
say that the river could carry
boulders just as large. Now

I want to call the attention of the Court to this - I want to inform the Court what is the difference between a sluice and a river in that particular respect

Mr Hart. This witness has sworn that he don't know - he says he don't know the velocity of the river nor the amount of water with a certain velocity will carry, he does not understand any of the rules of hydraulics

The Court. He said the one had a fall of 440 feet and the other had a less fall

Mr Hart. Yes he said 300 feet

The witness. No I do not state that it had 300 feet to the mile, 300 feet to about 8 miles

Mr Bryan. And the sluice is 440 feet per mile. Now what is the bottom of a sluice composed of? A. The sluice at the Independence mine is composed of corn

2 What Kind of iron?

A Inch by Inch and a half
bars

2 What is the difference as to
the movability of heavy mate-
rial on a bottom, and upon
the bottom of the North Fork
of the ~~Edmoncan~~ River?

A Well, it would move faster
on a smooth bottom than on
a rough one

Mr Hart. We will admit that
Mr Byrne does it at all
follow because you can send
a boulder weighing 1000 lb
down your sluices with the
rain that it would ever move
an inch after it got there

Objected to as leading
The Court. There don't seem to
be any thing that needs ex-
planation

Mr Byrne. I will ask you a
question that was not asked
before, by leave of The Court
that is; as to his knowledge
as to the extent of the rail-
road excavation on the ridge

between the North Fork of the
 American River and Bear River,
 and particularly on that side
 of the railroad, the light
 material from which would
 necessarily flow into the North
 Fork, on the side between the
 Bear River and the North Fork,
 have you observed the extent
 and character of the exca-
 vation and filling on that ridge?

A. I know the excavations and
 fillings are heavy

I doubt what extent do they
 contribute to this natural work
 of which you have spoken
 this morning?

A. I think that contributed to
 it just in a similar manner
 to any other material that
 had been loosened

Q Do what extent? A I could not answer that question

Q You spoke this morning of certain kinds of soil being improved by sand, I state to the Court what kind of soils would be improved by sand in your judgment? A Stiff clay soils, adobes

Q You also spoke of having drained a reservoir at your farm near Auburn and having cultivated it the year after the water was drained out? A Yes

Q What appearance did the surface of that reservoir present after the water had been drained with reference to the general appearance of that character which they call slickens down here?

A Well it looked in the surface and cracked open

and curled up in cakes

Q How deep were the cracks? A I could not say how deep they were I did not pay any particular attention to it

Q Into what sized cakes did it crack?

A All the way from a few inches to a couple of square feet

Q Have you ever seen any of this stuff they call slickens down here when it is dry? A The only thing that I have seen and noticed in that particular was was in the windows at San Francisco

Q I mean here near Sacramento? A I have seen none of it around Sacramento

Q What mines are in Bear River above the head of Bear River and Auburn Ditch if you know?

W. H. Hunt I did not examine him about that

A the Dutch Flat mines and others; but I would not state what they are. I am not familiar with that country over there

1 Mr. Young Q Do you know there are others, but do not know what ~~they~~ ones. A Yes Sir

Q Now you were asked if a very slight amount of this sedimentary material would not color a large quantity of water. I will ask you if a very slight amount of blue gravel would not color water also? A It would take a very large amount of this character of material <No. 1.> exhibited here to color water

Q What color is it when it is in the bank?

A A kind of bluish cast a bluish color

Q More so than ~~the~~ it now possesses? A Yes.

Q Speaking of the reservoir

and the accumulation of sediment from natural causes there, how frequently are these reservoirs washed out with reference to the bottom material that is deposited there?

A Well there are small reservoirs in the vicinity of Iowa Hill that have to be washed out very often.

Q How frequently?

A There was one called Weisler's reservoir. I believe it was washed out last Fall. That is all the material that had deposited in it was sluiced out.

Q How often is it necessary to do so? A It would be necessary pretty soon again. The last storms filled it up considerably.

Q Why is it necessary to wash it out so often?

A It would fill the reservoir up if we did not

wash it out

Q That is the natural wash?

Mr Hart I object to any suggestions being made to the witness

Mr Byrne Q Did you say that the big reservoir was constructed in 1872?

A I believe it was constructed about that time

Q Do you know when that ditch was completed, the Iowa Hill Canal?

A I do not now recollect the date of its completion

Q Was it not before you went to Iowa Hill?

A It was

Q Do you in fact know when that was built?

A I do not know the exact time it was built only from hearsay

Q You were asked the question if the red soil of the Pauranento Valley contained any sand?

Does it in fact contain sand? A It does.

Q What proportion of all the land in this Valley contains sand? A Well the greater proportion of this valley and all other countries that I am acquainted with contain ~~any~~ sand.

Q Are you familiar with the tract of country between the American River and the Foot hills to the East ward here where the land of the Central Pacific runs? A I have been over some of it.

Q What is the character of that portion of the Sacramento Valley with reference to the amount of ~~land~~ sand? A There is considerable sand along the line of the railroad.

Q Describe that country to the Court. A After you get up to Rockland

Then comes a belt of country
there that is composed
principally of decomposed
granite

Q How is it just after
you cross the American
river and from there
clear to the foot hills or
to Rockford pay?

Answer I have been
across the San Juan
grant and that is a
sandy soil, gravelly
and sandy

Q How is it in that belt
of country extending from
the line of the Central
Pacific Rail Road up
the Valley to Marysville?

A That is this gravelly,
sandy soil; the quartz
pebbles plainly seen
from the railroad cars

Mr Hart Q Plainly seen
from the railroad cars?

Answer is

Q From where? Any
can see them pretty well

all along after you pass
the American River bridge

Q Where? A Up to
Rocklin

Q I thought you said
to Marysville?

Mr Byrne I asked him
about the Valley extending
up to Marysville

Mr Hall I understood
him that all that land
up there was sandy soil
from the American river
to Marysville; did you
pay that? A I did not.

Mr Byrne Q How far
up are you acquainted
with it? A Dam are
acquainted with the Country
above Pinebluff and
about there. A great
deal of the land there
is gravelly about Pinebluff

Q Now let me ask you
if vegetable mold of itself
forms good or productive
soil? A Decomposed
vegetable matter.

Q Yes sir alone?

A It does not, no.

Q You speak of blue dirt in your cross examination? What do you mean by blue dirt? in that connection?

A Similar to this sample (No 17)

Q You call that a sandy formation? A This (No 17) has sand in it.

Q Yes, I know there is sand in it. You spoke of some mines being worked at a place called ~~Lost~~ Camp? Do you know when they were worked or whether they are being worked at present?

A I do not.

Q In the last year or two? A No sir I have simply seen the pit from a distance. I have seen the pit from the opposite ridge.

Q Why is it that the

mines at Hamusus is that particular mine you spoke of there cannot be worked from the surface by hydraulic process?

A Because there is about from 800 to 1000 feet of cemented volcanic sediment overlying the gravel

Q Can that be washed?

A It cannot, it is ~~too~~ too hard, in places harder than this material (No. 1.)

Q Did you say that the mines at Dutch Flat had been worked off to the bed rock and a plane created where the mining before had stopped? A I did not

Q What is the fact in reference to that as to their being worked down to the bed rock? A The principal workings there have been on the top gravel

Q How is it in that connection with the Gold Run Mines?

A The principal workings of the Gold Run Mine have been on top gravel

Q Do you know how much has at all been worked to the bed rock at Gold Run?

A That is the area.

Q Yes sir, about the space

A I do not. I merely casually looked through the pit

Q You were asked if you understood surveying? Have your surveys ever been tested by the experience of professional surveyors?

A No sir. I do not know that they have. I do not know whether they have or not. I have made several of them, I do not know whether they have been tested or not

Q You do not know whether they have been tested?

A No sir

Q Did you make that map from which you have

been testifying?

Q I made the original and that is a photograph of the original map. The original map was made on a 4 inch scale.

Q You were asked how you knew that certain quantities of material that you spoke of had been removed from mines there, Independence Hill I think it was between 1876 and 1878? How did you know it?

You drew a diagram which explained the matter to the Court if you recollect just in that connection.

A That was not Independence Hill.

Q Where was it, then?

A It was at Iowa Hill.

Q You drew the square pit there and one of a different form you said the square pit had been washed out prior to 1876? Any more?

Q And the other piece
 ayes sir

Q How did you know that?

A Because I have seen the
 work going on there

Q How did you know
 as to that that was worked
 before you went there, what
 evidences were presented
 to your eye that these wash-
 ings were not recent?

A Well there were no
 flumes that were in order
 there - everything appeared
 to have gone to wreck and
 I could judge by the char-
 acter of the bank and the
 appearance of the bank
 whether there had been
 recent washings or not

Q Were there anything
 or was there anything growing
 on the surface of the bottom
 of that pit? A On the
 Iowa Hill pit?

Q Yes sir A I do not
 recollect that there was on
 that pit

Q No trees or anything of that kind? A No sir

Q I thought perhaps there might be? A That was in the Union pit - I saw trees growing there - small timber

Q How is that main bank? What is the appearance of that main bank as compared with the appearance it presented in 1876?

A Now?

Q Yes sir A It appears to be the same, with the exception in this washing that was made out since

Q I am not referring to that but that which you said was worked prior - You said that you had made certain measurements of the mines that discharged in Indian Canon, 18 months ago and you were asked how you knew that your estimates from these measurements are

correct at the present time?

Let me ask you if any work or mining has been done in those particular claims since that time?

A Not the ones that I measured at that time

Q You were asked if the mines discharging into Indian Creek also discharged into the North fork of the American River; do they? Is Indian Cañon a tributary of the North fork?

A It is a tributary of the North fork of the American River

Q At what point with reference to Rice's bridge does it discharge into the American River? At some distance below Rice's bridge. I do not know the distances

Q Could you approximate about how many miles? ~~and~~ A About $2\frac{1}{2}$ miles here on the map

Mr Belcher That is Mr

Allard's map that you refer
to? Ayres sir

Re cross Examination
of
John B. Stobson

Witness Q What kind of
iron bars do you put in the
sluces? A Iron bars
an inch thick $1\frac{1}{2}$ inches
wide and 6 feet long

Q Well what is their general
description? They have a
name have they not?

A Riffles

Q Riffles? How near do
they resemble rail road iron?

A They do not resemble it
at all

Q Well are they put close
together? A The riffles in
the Independence flume
are placed an inch apart
laterally, there are iron
cleats between them

Q How are those iron cleats
fixed? A A foot apart

on the riffles

Q What are the iron chains for? A To act as riffles to catch the gold

Q Do they catch anything else? A Yes sir

Q What else do they catch? A Nails

Q From where?

A From the old houses on the hill, from the old buildings on the hill

Q Do you wash houses down your flume? A Yes we wash houses we paid for them and tore them down and washed them through

Q The lumber - what do you send the lumber down there for? A That that was too long we burned it up

Q What object did you have in sending this lumber and nails down your flume? A Just to get rid of it? You wanted to send it down here?

A Fuel is scarce down

here

Q It catches the nails and the gold? Ayes sir

Q Does it not catch such specimens as that <No. 1.> about the corners, jerk small pieces of it off - the big ones? A This piece <No 1> there is none of that material in the mine

Q There is not any at all? A No sir

Q I thought you said there was a small bed 20 feet deep there? A In the Independence Still mine?

Ayes sir

A I do not pay any such thing

Q That was in the Iowa Hill mine? Ayes sir

Q What kind of iron do you put in your sluices at Iowa Hill? Or do they put in their sluices?

A They use some iron and some blocks

Q Blocks? Ayes sir

for riffles

Q The blocks were about an inch apart; a short distance apart are they not?

A They are put in the flume an inch or an inch and a half apart, some times more. Different miners have different systems of riffling the flumes

Q That is to let the gold drop down in the little pockets? A Yes sir.

Q They operate in two ways don't they? They have them to catch the gold and to assist in grinding up some pieces that may be in the flume at the time?

A No, they do not assist in grinding it up

Q Why don't they? A They prevent the wearing of the bottoms of the flume

Q And they assist in grinding out this kind of material (No 1)? A No sir

Q This kind of material

Catching on corners of that kind after a bed or iron?

A There are no corners there.

Q The loose particles are caught? A The corners do not project

Q How are your corners made? A The floor of the flume is perfectly smooth with the exception of these depressions between the rifflers

Q These places are put up above the smooth surface? A They are not

Q Where are they, below?

A Between them

Q You first constructed a smooth surface and then put blocks or iron bars on that surface? A Yes sir

Q That makes what you would call an irregular surface? A No I do not consider it so

Q How denominate this rough surface with cracks all through it?

Ans sir

Q There are the blocks sticking up. Now if you were to reduce the size of the blocks so as to make them about half an inch each way, take those square blocks and put them up that way you would call them irregular wouldn't you? <Illustrating>

Ans sir, not if they were put close together

Q If they were put a half an inch apart? Ans sir

Q You will call that a perfectly smooth surface?

Ans sir the openings between those ripples become filled with the heavier particles of gravel and pebbles

Q How do you get those out?

A Take the ripples up and take them out

Q I take the ripples up?

A Yes sir

Q Why do you call that a ripple? A That is the

name given to them by
miners

Q Well why did they give
it the name of ripples

A I am sure I do not know

Q Because it made the
water run a peculiar way
is it not? A No sir

Q You said that there
was some rail road ex-
cavation on the ridge be-
tween the Bear River and
the North fork? What do
you mean by an excavation?

A Between Bear River and
the North fork?

Q On the ridge between
Bear River and the North
fork what do you mean
by an excavation?

A Cuts through the hills

Q Down into the ground
or through the ground or how?

A Down into the ground
and tunnels through at places

Q Well they don't wash
those excavations away do
they? A No I don't suppose

they do.

Q Those excavations are now just as they were when they were originally cut?

A The rain washes some of them away.

Q I ask you if those excavations are not now just about in appearance as they were when that railroad was originally built? A They are not.

Q Well what difference do you see in them?

A Well they have crumbled off considerably since.

Q How much have they crumbled off? A I would not say.

Q An inch? A In one place a good deal more than that.

Q But most places probably more than an inch is it not?

A I never measured it.

Q You mean to testify that all of it would be improved by mixing it with sand?

A I do.

Q In what respect does that improve it? A Lightens the soil

Q Does it lighten the soil? A Yes

Q Don't you know that it makes it a very hard element? A I do not

Q You do not? A No sir

Q Did you ever see it tried? A I have seen sand put into soil to lighten it

Q Did you ever see sand put into adobe soil?

A I into adobe soil

Q Where did you see that done? A In the bottom, in the foot hills.

Q You have adobe soil in the foot hills?

A There is adobe soil on the farm I own in the foot hills

Q What color? A Black

Q Black adobe? A Yes.

Q How does that adobe operate when it is wet?

A It is pretty sticky stuff

Q Do you mean that to
take sticky stuff like that
and mix it with hard
sand it will make it lighter?

A What do you mean by
hard sand?

Q Sand that is made of
mineral, of course, rock —
do you mean that that
would lighten adobe?

A Certainly it would
sand will lighten adobe

Q But would it not when
dry lighten that blue cement
there (No 1)? A No sir it
would not

Q How many times have
you tried that? A I
have tried it once

Q Why is it that a small
amount of blue gravel does
not color the water percepti-
bly? A Because it is
so hard that it is diffi-
cult for it to get into sus-
pension — into such a state
that it would go into suspension

When it gets into such a state why is it it will not ~~cohere~~ the water, a small amount? It is because it runs on the bottom is it not, mostly? A I do not understand you, General.

Q Does not sand the greater portion of it that is carried down the river run on the bottom?

Mr Byrne That question has been asked and answered

A Deposits on the bottom, I know that

Mr Hart I said it runs on the bottom; does it not where the current is swift enough? A If there is current enough to move it of course it must move on the bottom

Q And in proportion as the current increased, the sand rises towards the surface? A I do not know that

Q You do not know that?

Ans

Q That is a common sense proposition it seems to me. Now then is not that the reason that a small amount of blue sand does not color the water as much as a slight amount of this light sediment that floats near the top? A Certainly a lot of rocks would not color the water as light material would

Q In a mining sluice does all the sand or nearly all it run along the bottom?

A I judge that it does. It often bakes on the bottom so that it is difficult to remove

Q You say from the American river to Senechal the soil is sandy and gravelly? A Gravelly soil yes sir

Q That route follows the foot hills does it not?

A Yes sir

Q And the soil that you find there partakes of the character of a mountain soil?

A It does

Q Do you know the difference between that soil and the Valley proper when you get ^{farther} down?

A Well there are red lands in the Valley quite a piece down. I have noticed them

Q Did you ever examine those lands to see the proportion of gravel in them?

A No

Q You do not know whether or not they contain but very little sand? You say vegetable mould alone does not make good soil?

A Decomposed vegetable matter, do you mean?

Q Vegetable mould is the word that was used

A I do not believe it will

Q I believe that you mean by that vegetable matter must be mixed with soil

before it can make productive soil do you not?

A Decomposed vegetable matter must be mixed with soil to be productive

Q You said that there were no trees in the Iowa Hill in 1878 when you saw it?

A There were none in the pit

Q No trees in the Iowa Hill mine in the Iowa Hill mine? A There were not

Q Is it not characteristic of these mines that where they have not been worked for some time they do have trees in the pit?

A Well in some kinds of rock trees and vegetation

Q Is not that the general rule? A No.

Q It is not the general rule? A No

Q The the mines up there?

A The bed rock of the Iowa Hill pit is a hard blue

rock and don't decompose very readily

Q The Inwa Hill had not been mined to bedrock in 1875? A Oh yes sir.

Q It had? A Yes

Q The mining was not mostly surface then?

A No. There was some blue gravel washed out too. It was washed to the bed rock

Q When you speak of surface mining how deep do you mean by surface mining?

A Well from 6 inches to 10 or 12 feet I consider surface mining

Q You said that the mining there at Gold Run had been mostly surface mining didn't you? A This was

the material that I call the surface of Gold Run the top gravel

Q I ask you if you did not say that the mining at Gold Run had been surface mining mostly up to 1878? A I

believe I stated that the majority of the mining at Gold Run was on top gravel

Q Didn't you say it was surface mining?

A I don't think I did

Q What do you mean by top gravel? How deep do you go down before you reach bottom gravel?

A Sometimes 300 feet deep

Q You do not determine whether it is bottom or top gravel by the number of feet that it is below the surface here? And sir

—————

Testimony
of
H. L. Noyes
Re-Called for depts Sworn

Mr Byrne I am informed that you desire to make a correction in reference to a matter testified to by you the other day in which you made a mistake. Will you state to the Court what it is? A It was in reference to the claim which I was working, as I understood the question which I have understood afterwards the question was in regard to the amount of material that was in the top bench, but I understood the question it was in the claim I was working which is the second bench and not on the bed rock.

Q You understood the question to relate to the Excellair mine whereas in fact it related

to the fold Run? Ayes
 is it related to the top
 bench

Q of the fold Run mine?
 Ayes is

Q What was your answer to
 the question? A My
 answer was that there was
 some boulders that were the
 size of my head about
 40 per cent, about 40 or
 50 per cent, somewhere along
 there of heavy material that
 I was working in the Excelsior
 mine

Q That is the way you
 understood it? Ayes.

Q What is the full with
 reference to this top stratum
 of the fold Run mine as to
 the existence of boulders as
 large as a man's head?

A The top stratum is a
 finer quality composed of
 sand and very small cobbles

Q Any boulders in that
 material as large as a man's
 head? A Very few

Q Are there any? Ashere
may be a few, but very
few if any in the top
gravel

Cross Examination of H. L. Noyes

By Mr Hart Q Who suggested
this correction to you?

A There were several parties
that I spoke to about it,
they said they thought I
misunderstood the question

Q Who were they that sug-
gested this correction?

A My friends that came
with me from Gold Run.

Q Who were they?

A Some of the Gold Run
boys

Q Who were they? A Mr
Price spoke to me first

Q Is he a Gold Run
boy? A He resides there

Q Well who else?

A Well I asked Mr Byrne

if that was the question, just evening, in regard to it, and he said that it might have been - I told him that I misunderstood the question of that was the way it was answered and I asked Mr Byrne if that was the way it was answered or something similar to it

Q Who else suggested this thing besides Price?

A I do not know any one else in particular

Q Mr Gould? A I was talking to Mr Gould and asking him myself if I stated that

Q Who else? A That was all that I know of

Q No one else but Price?

A No sir

Q Now is Price "several of your friends" - the ones that you spoke of when you say that several of your friends from Gold Run had spoken to you about

it - how many are there of Price? A I do not know as there is several. Mr Gould I consider my friend

Q Didn't you say that several of your friends had spoken to you about it and had said to you that they thought you had been mistaken? A Well how many compose several?

Q I do not think that Price is several. I want to know who the others were

A I said Mr Gould and Mr Byrne - I said I spoke to Mr Byrne

A Well then you spoke to Gould and you spoke to Byrne but who are the friends that spoke to you?

A Asking them - I asked those gentlemen myself

Q Who were the several friends that spoke to you about it? A Mr Price, as I said before is the only one that spoke to me particularly

Q When did Price speak to you about it? Yesterday

Q Where were you when he spoke to you about it?

At the street

Q What did he say to you about it?

Mr Belcher I submit that this kind of examination is not at all necessary nor material in any way. It is simply for the amusement of the Attorney General and not useful for any purpose in the wide world.

The Court I do not know. He might think that the business had been improperly influenced?

The Witness If I said that I certainly made a mistake in the question.

Mr Hart Q I asked you where you were when Mr Price spoke to you about it?

At home going down to dinner yesterday

Q What did Price say?

Alte asked me if Dunder should the question in regard to the upper stratum, and I told him I did not know what he meant by it something similar to that

Olyn told him you did not know what he, Price, meant by it? Olyn — what he meant by the upper stratum

Q Then what did he say?

Alte said that I made the remark that there were some heavy boulders the size of your head in the upper stratum. I told him if that was so I certainly made a mistake in the question

Q Now are there not some heavy boulders the size of your head in the upper stratum? A I do not think there is many, only a few

Q I want to know if there are not some heavy boulders

then the size of your head
 A I would not say. I could
^{not} swear positively whether they
 were the size of my head,
 for I never took the dimensions

Q Now you have come here
 to inform the Court that
 you have not taken the
 dimensions and your head
 have you? Is that what
 you come for? I asked you
 whether there are not boulders
 in that stratum the size of
 your head? A I came
 to make a correction as to
 the upper bench and the
 second bench I was working

Q Are there not heavy boulders
 in that ^{upper} stratum the size
 of your head? A I do
 not know as there is

Q Well do you know that
 there are not? A I could
 not say that, I could say
 positively that if there are
 any there are very few and
 very small

Q Didn't you state in

answers to Mr Byrne that there were a few? A said a few, there might possibly be a few, but if they were there, I said there were very few.

Q Well there are very many of those boulders in the Excelsior claim in the upper stratum? And is not the upper stratum. In the stratum that I am working there is a great many as I answered the first question put yesterday

Q Do you mean to say that was the question that was asked yesterday as to the stratum you were working in? A I understood it being that as I gave the answer

Q Were you not closely examined first as to the lower stratum, with your attention called to that piece that is there now, that specimen and then with

reference to what was above it and then with reference to the original workings?

A I do not remember of any such question being asked, of two benches at all

Q You do not? And sir

Q And if there were any such you did not know what you were talking about?

A I misunderstood the question as I said before

Q How is that?

A If there were three strata mentioned I misunderstood it which there is in the claim and will be found if worked to the bottom. I am working on the second bench on the Excelsior and that was what I thought the question was, in regard to that bench and I was working in the Excelsior which is certainly composed of a great deal of heavier material than the top

bench on top of it

Q Have you had any consultation with Molyneux or others in relation to this case? A I have met some of the Attorneys

Q Have you ever met in consultation? A With Mr Byrne. I have had several talks with him

Q I ask you if you have had any consultation with Molyneux and others in relation to this case?

A I have met with them

Q You have? Where did you meet?

A I have seen them several places

Q Where did you meet in consultation?

A I met Mr Byrne and Molyneux at several places in town, at the Capitol and at - Q You know what I mean. I ask

you where you met them in consultation? A I said I have met them at the Capitol Hotel and also seen them

at the Union

Q Where did you see them at the Capital Hotel, what part? A Right in the bar room

Q Where did you meet them in consultation? A Well we talked there considerably

Q Did you talk in Mr Gould's bed room?

A No, I have not been in Gould's bed room since I have been here

Q Did you talk in anybody's private room at that time? A I do not know whether they were private rooms or not I could not tell

Q You could not tell? Where were those rooms that you could not tell whether they were private or not?

A I do not know as any of the rooms were private

Q What rooms were you in that you did not know whether they were private or not? A If I should go

into anyones room I should not know it was private.

Q You say you do not know whether those rooms were private or not, I ask you what rooms you were in that you did not know were private?

A I met Mr Byrne and Mr Gould at the Union

Where in the Union?

A The Union sleeping house is it not or hotel?

Q Up stairs? A Yes sir

Q In what room?

A I could not tell you what room

Q Was it a public or a private room? A Well it was a bed room, something of that sort

Q Well now what time of the evening was that?

A Well I could not tell you that

Q When was that? A Well that was last evening sir

Q What time of the evening?

A I said I could not tell you the time for I could not remember.

Q At that time you discussed this question did you?

A This question; no - I asked Mr Byrne talking about it -

Q You talked the matter over at any rate didn't you

A I asked Mr Byrne how the question was put or something of that sort

Q Now sir I want to ask why you did not tell me when I first asked you if you did meet those parties in a private room in consultation? A I do not know as that room is private in particular.

Q I ask you why you were so particular in keeping that matter to yourself and first telling me in relation to your meeting in public bar rooms? A I meet with them there first

Mr. Austin I object to these

Mr Hart Q Why was it that I had to pull that fact out of you by cross examination, and severe cross examination? Why did you try to keep it back?

Mr Cathin I object to that. There is no ground for assuming that he is concealing anything or that Counsel attempted to pull anything out of him.

The Court I do not know that it is material, for one. A I have nothing to keep back that I know of.

Mr Hart Q Why was it that you did not tell that to me when I asked you about it?

A You asked me if I met them and I told you I had met Mr Byrne and Mr Gould.

Q I asked you if you had met them in consultation in a private room. A There was nothing private that I know of.

Q Now you knew that that was Mr Byrne's bed room that you met in didn't you?

A I do not know whether it was Mr Byrne's bed room or not. I could not swear to it.

Q You found Mr Byrne there? A Mr Byrne was there

Q You knew that that was Mr Byrne's bed room as well as you know anything of that kind when you go to see a man and find him at home? A I did not go to inquire for him at all. I just happened to go there

Q Was it an accident that you fell into his room?

A Not that I fell into it. It was no accident

Q You say you just happened around there who told you? A I happened around at the Union

Q Who told you where that room was? A I met Mr

Byrne. I have seen him before
but never had no —

Q Who told you where that
bed room was?

A I went there with Mr
Gould

Q You did not happen
there then, Mr Gould took
you there?

A I happened at the building
Mr Gould & I did not go to-
gether, I happened in
there

Q You happened in the
bar room and Mr Gould
took you to the bed room?
A Yes.

————— " —————

Testimony of Albert Stalen

Called for defendant

Sworn

Mr. Cablin: Where do you reside?

A Folsom

Q What is your occupation?

A Superintendent of the National
Ditch

Q How long has that been your
occupation? A I have been
5 years in the ditch employ,
2 years as Superintendent, 5
years in the employ

Q 5 year Employment and
the two last years as Superin-
tendent? A Yes sir

Q State where that ditch takes
it water from?

A From the South Fork of
the American River, two miles
above Salmon Falls

Q What is the length of the
main canal? A The main
Canal from the dam to the
End is $14\frac{1}{2}$ miles, the main Canal

Q What is its capacity, the carrying capacity of the canal?
 A The ditch was measured in the Spring of 1880 when several of the flumes were out of repair and we do not run a great quantity of water. It then measured if I am not mistaken 2280 cubic feet, about 1100 inches.

Mr. Hart. It carries 1100 inches.

A Then it did

Q When was that?

A That was in the Spring of 1880, the flumes were all out of repair. They have since been repaired and I suppose it will carry 50% more now.

Mr. Catlin. Since they are repaired they carry about 50% more?
 A I suppose so, we never measured it since.

Q Is that per second or per minute the cubic feet

A Per minute.

Q That is about 1100 inches?

A Yes Sir

I What measurements is that ordinarily termed, what measurement comes you call that?

A 1100 minus inches — Natoma inches rather. There is a difference between the different ditches.

I State what these inches are, how it is measured and delivered, though what sized aperture and under what pressure?

A We measured it what we call still water, through a 4 inch opening with a 6 inch pressure.

I And under that pressure it carried about 1100 inches when you measured?

A Yes Sir

I State whether that measurement was taken with accuracy or not, whether it was a very particular measurement or a general one?

A We took it out at New-York ravine, at Sweetwater, and at Salmon Fall, at

Q Summer on the same day
 Now state what purposes
 the water of that ditch were
 used for during the time that
 you have been in the employ
 of the Company?

A For mining and irrigation.
 I state for which purpose
 it is used the most?

A. In summer it is used
 about half for irrigating, in
 fact I would say more for
 irrigating than for mining.
 In the winter time it is not
 used for irrigating at all.

Q Now state what is the
 first mining point that is
 supplied with water for mining
 purposes from that Canon,
 one of any importance I mean?

A First we supplied water
 to Red Bank, but it did not
 amount to much, we sup-
 ply about 40 acres there now.

Q I will ask you whether
 or not during the time you
 have been there any has been
 supplied to McDowell Hill

A No sir

I State if you can about the extent of by draught mining on McDowell hill from its appearance as you have observed it, if you have observed it.

A You mean how many acres is washed off?

I. Yes sir, tell me whether you have made recently any examination of it for the purpose of ascertaining the extent of area and the depth of the former mining there

A I have been over it and looked at it, yes sir

I Well, state what the area of surface mining has been mined there and where it went to, where the mining material went to?

A McDowell Hill I should judge there was mined off about 30 acres between 20 and 30 acres surface mining mostly.

I Well to what depth?

A On an average I should judge not more than 5 feet

Mr Hart Not more than 5 feet? A I should think not
 Mr. Catlin It was deep in the deepest place?

A There are places 8 feet and then are places 9 feet, and there are places 2 feet, on a general view of it I should judge it was not more than 5 feet

2 And the average for the whole 25 or 30 acres would be about 5 feet?

A Yes sir I should judge so

2 What kind of deposit or material was it? What kind of soil or earth?

A Mostly a red soil or gravel, red soil on top and gravel on the bottom

2 State where that material was washed to, directly or indirectly?

A Directly into the South Fork of the American River

Q Describe the next mining locality below that on the South Fork supplied by the water of the Noloma Canal?

A The next mining is the Red Banks.

Q State the clay of the mining, the character of the mining at Red Banks, about the area and the depth and the character of the soil?

A The Red Banks is mined very deep. I should judge it is mined for 80 or 90 acres perhaps more.

Q To what depth?

A. There is on the face of the hill, it will go to 5 feet and back in the hill it will go to 50 feet.

Q Which do you mean by the face of the hill, the portion directly on the river bank?

A Yes sir.

Q And then as you go back it grows deeper?

A It grows deeper.

Q Now in what manner

is that material which lies
so much deeper had washed
into the river, through what
means or channels?

A. In several places I
saw where the sluice boxes,
are run to the river

Q. How do they get over
that run that you subscribe,
or through it, describe how
it is washed through

A. By the common sluicing
process I suppose

Q. How deep are those sluices
set in the ground if at all

A. The sluices were set in
the tailings

Q. Describe how they sluice
through this. You say it was
only about 5 feet on the
river bank?

A. On the sides

Q. And on the bank they
were 50 feet deep?

A. Yes sir

Q. Now, how is that washed
through into the river?

A. Because the cut ran

right in the bank.

Q There is a cut, it goes through open cuts? A Yes sir.

Q That is what I wished you to describe. Now is there any mining carried on there, or has there been any during the last 5 years since you were acquainted; and if so to what extent?

A There has been drift mining going on mostly all the time but very little extent, a very little.

Q About how much water was used then? A Two years ago there was considerable, there was used as much as 150 or 200 inches but not now more than 40.

Q From 150 to 200 but now not more than 40?

A From 150 to 200 inches.

Q Will you look at this map and state whether you are acquainted with that map or one lithographed the same as that (referring to map of

Armenian River and Natoma map
previously introduced and
now marked Italian #1

I will ask you if this
is a map that has been
used by the Company in
which you have been employed,
during the time you have been
connected with their business.

A Yes Sir we always use
that map

I Point out on that map to
the Court where McDowell's
Hill and Red Banks are
and the river and the Canal,
showing the proximity of the
Canal to the river.

A It runs along side of
the river here (Explaining
the map to the Court)

I Now state generally what
the Elevation of the Canal is
above the river at McDow-
ell Hill, at the point where it
passes McDowell Hill -
What is Elevation of the
Canal above the river bed?

A I need not tell with

any exactness because I have never been down to the bed of the river.

Q. Don't you give us some idea about how high the Canal is above the bed of the river there, I mean the ordinary surface of the water at low water?

A. I should guess about 100 feet, I would not be sure of it.

Q. Well; state whether it is about the same or not as Red Bank?

A. Yes sir; there is from McDowell Hill to Red Bank, would be only about a mile I guess, and there would be about 4 or 5 inches difference in the fall of the ditch, but there would be no great difference in the fall of the river.

Q. Now state whether there is any branch of the Canal in the vicinity of Mormon Island that leads water

to mining localities
 Q The first branch ^{of the} canal
 goes to Mormon Island and
 then goes to the State Prison
 I know long is this branch?

A About 6 miles

I About how much water
 does this branch carry?

A About 100 inches

I Where does the next branch
 if any, go? A The next
 branch is in Boulder field
 a place where Boulder lives,
 a branch goes there

I Point is out on the map.

A It goes through to Holston

I That branch leads to Hol-
 son does it? A Yes.

I What is the capacity of
 that branch? A It used to
 be 200 inches and last month
 I have made it 500

I Last when?

A Last month I made it larger,
 it would carry 500

I You have increased it during
 the last month? A Yes.

I About doubling its capacity?

A Yes sir

I What purpose does the Bank Supply, you say it leads to Holston, what purpose does it supply there?

A Mining, irrigating and the town of Holston.

I Why have you enlarged it during the last month?

A Because there is another claim opened, there is another claim that wants water there.

I Another mining claim?

A Yes sir

I How much water does that mining claim require?

A It will require 200 inches

I Now state what the mining claims around and in the vicinity of Holston are that are supplied by this Holston branch canal that you have spoken of?

A The first claim is the Lawson claim in the town of Holston

I State how long that claim has been working as

few as you personally know
 A Personally I only know
 5 years.

Q Then I say it has been
 working while you have known
 it? A Yes sir

Q Chas. Lawson? A Yes sir
 Q State where that appears
 with relation to the town of
 Folsom, how it is situated
 whether on low ground or high
 ground? A It is on
 high ground generally the highest
 part of Folsom

Q How far is it above or below
 the bridge that crosses the river
 there? A It is above the
 bridge

Q How far above about?

A I forget the number of the
 block. If I had a map I
 could see it

Q I am not dealing in miles
 or feet, I am asking you if
 you can tell about whether
 it is a mile, a half a mile,
 a quarter of a mile, an eighth
 of a mile, or what?

Q If we had a map of Folsom we could see approximately. It is I should judge 1000 feet

I have much ground has been worked off in that claim area? A I should judge about 4 blocks of the town of Folsom.

Q It is within the township of Folsom. Just point it out as near as you can on that map (referring) Mr. Hart. How much is a block? A About $3\frac{1}{4}$ acres

Q That is about 14 acres?

A Yes sir (the witness points out to the Court)

Mr. Catlin. About what average depth? A I measured it last week if I may see my notes.

Q If you made memoranda yourself you can refer to them? A Yes sir I did (referring) average depth is 22.87 feet

Q. State what kind of

Material that is that is wash-
ed from the claim?

A Gravel and surface soil
mostly

Q How does the top of it
compare with the bottom as
to its gravelly character?

A The depth of the soil varies
there. The more you go to the
river the less soil there is
on top, the more you come to
the bank the more soil

Q The nearer you come to
the river the less the top
covering of soil? A Yes.

Q As you go back?

A The deeper the soil gets.

Q Now answer the question
how the top soil compares with
the bottom with respect to
its gravelly character?

A You mean how many
feet of soil there is?

Q Now, listen to my question
how does the top soil com-
pare with the bottom of
the claim, with respect to its
gravelly character. Which

has the most gravel the top or bottom?

A Oh, the bottom of course, I did not understand you

Q Now how much water does he use or what amount of water does he require for washing? A He has his own reservoir and we send a little stream constantly in there so as to keep it full. Whenever the reservoir is full he takes out 200 inches

Q Taken out where from?

A From his own reservoir.

Q The amount that he uses is about 200 inches?

A Yes sir, but we only sell him 30 inches constantly, that is whenever his reservoir is empty.

Q And he houses it in his own reservoir and when he washes he uses 200 inches?

A Yes sir.

Q State how you apply that water, whether by ground sluice or piping against the

bank? A Ground Sluicing
I Does he pipe any?

A When he brings water
down the claim, the pipes

I Does he use the pipe against
the bank? A No sir

I How high is this claim situ-
ated, about what elevation
is it above the river, vertical
Elevation

Mr Hart. I He said 1000 feet
above Polson

A. 1000 feet above the bridge
I said

Mr. Hart. I supposed it was
right up in the air

Mr. Coblin No, it was at the
river he meant

A I should judge it was
about 300 feet

Mr Hart. 300 feet above the
river? A Yes sir

Mr Coblin Now do you know
about the fall in his tail
sluicing? A No, I do not

I. State whether they were
very slight, or very great?

A There are very heavy

as far as I can see

Q A very heavy grade, a very steep grade? A Yes sir. I mean by heavy grade a steep grade? A Yes sir.

Q State whether or not the tail is to the river? A Yes sir.

Q State what you observed in regard to the tail pile and its effect in the river, its deposit in the river? A. Every

time it is washed away.

Q How often does it fill up the river there in the summer time?

A It depends on how much he works in the summer. Sometimes more, and sometimes less.

Q When he works more, how does the tail pile work on the river in the summer?

A It lays there in the river till the winter floods come.

Q How far does it extend into the river? A I judge about 50 or 60 feet.

Q In regard to the work

Of the river at that point
Does it extend a quarter of
the way across or half way
across? A Oh no,

I know how far? A Well, I
guess about 50 or 60 feet
in the river, that is just what
I think, I do not know, I
never measured it.

I state what the character of
the river is in regard to the
grade of it in summer?

A It is what we call still
water

I Deep water there?

A It is between Devil's Elbow
and the bridge

I What is the distance between
the Devil's Elbow and the bridge

A About a quarter of a mile

I There is a share of about
a quarter of a mile there?

A It is called still water,
there is not much grade in
that

I There is no grade?

A No sir

I Now you say, it washes

Q Now, state what you mean,
how far does it wash away?

A Well when the flood
comes in the winter the whole
pile of tailings goes.

Q How far does it go?

A It goes off

Q I know it goes off from
them, but I am asking you
how far it apparently goes,
as you observed it.

A I do not know, I guess
it goes to Sacramento

Q You guess it goes to Sacra-
mento? A I do not
know where it goes.

Q I did not ask you to guess?
This material that forms the
tail pile, state whether it
is a heavy or light substance,
or whether it is gravelly or
what?

A It is very
gravelly, and mostly
what we call light gravel
mostly little pebbles.

Q How large are the largest
stones that come down out
of that claim?

A Oh, Vanu's size.

I Vanuon size, I know, there
are Vanuon size?

A By me and small ones

2. State generally about the
size of the largest ones?

A. I suppose such ones come
down < referring > some of
them but very few

2 About the size of a small
cobble? A Half of that,
the 16 in cobbles are taken
out in the claim of course

2 The largest ones are
thrown out in the claim?

A Yes sir

2 And from that size down
are put into the sluice and
go down into the river?

A Yes sir

2 State whether you noticed
any quartz pebbles, whether
you observed any quartz?

A. Do you mean these
white pebbles?

2 You know what quartz
is don't you?

A Yes sir

Q I ask you whether you had observed any quartz?

A Yes sir

Q Pebbles or quartz stone

A In all the gravel beds there is around Folsom the little white stones

Q Don't you know what these little white stones are what kind of rock it is?

A I suppose it is quartz, that is I always heard it was

Q I understand you to say you noticed them in all the claims there? A Yes sir

Q Both above and below the bridge? A Yes sir, at Alder Creek principally

Q In Alder creek at well A Yes sir

Q You noticed them, comparatively, how are they in the claim of Chas. Lawson - is there much of that material or only a little?

A Well, I have never paid very much consideration to that matter

Q You have not paid much attention to that. Now what is this other claim that is opened to which you bring this extra 200 acres of water

A It is a block 11 in Tolson
I who is the owner of it?
A Williams

Q State what depth the bank is in his claim that he is washing, & what depth over the wash?

A The depth from the surface to the bed-rock is 31 feet

Q From the surface to the bed-rock?
A Yes sir; and from the bed rock to the river is about 70 feet - from the bed rock to the river 70 feet?

Q State whether the tail directly into the river or not?

A The tail directly into the river

The Court. How far from the surface to the bed-rock?

A. From the surface to the bed rock in one place

Where I measured it is 31 feet, from here to the river is about 70

Mr. Catlin Well what is the average depth of his claim
A I think that would be the average depth

I Well, how much water, I believe you did state he required 200 miles. State whether he has been using water for mining is that in any other claim during the past year or two? A Yes sir.

I How much does he use when he works?

A 200 miles

I That is his head for working?

A Yes sir.

2. When he is working about how many days in the week does he use water?

A. I generally average about 5 days, mostly six days but he will lose a day now and then

I Now state if you ever noticed what is called the Japardell

Diggings? A Yes in

Please point out on the map to the Court. Put your pencil down on that point where the Texas Hill diggings are situated?

A From the limit of the town of Folsom to Willow Creek. Mr Hunt. Above or below the town of Folsom?

A Below the town of Folsom to Willow Creek

Mr Caplin You will find a little creek marked the Texas Hill branch. State what area of ground is washed off there in the Texas Hill diggings? A I should judge about 125 acres more or less

Q Is any portion of that Texas Hill diggings on the north side of the River?

A No sir, Texas Hill is on the south side of the River

Q State what appearance it now presents to the eye, A Looking over it what is

It covered with?

A Cobble pits

I Covered with cobble stones?

A yea sir

I Dowhat depth were these washes, about what depth?

A I can see on my statement here {referring}

Mr. Hart. Was this 120 acres?

A Just about, I should judge, on Texas Hill

Mr. Catlin Look at your memoranda if you made them Mr Hart. Did you make those memoranda? A yea sir

{referring} Some places from 5 feet, some places to 25

Mr Catlin State whether or not the old open cuts are visible to any one who will pass there and take a view of it? A Yes sir

I think when they washed into the river? A yea sir

I What is the character of the bank of the river on the opposite side of Texas Hill? A Deep bluffs,

high bluffs.

2 Very steep high bluffs?

A Yes & an

2 Kansas up to about which
height? A I do not know,
I have never been there, I
could not tell you

I can't see section on the
other side of the river very
plainly? A Yes & an

2. Well, I want to get some
general estimate about
the height of those bluffs?

Mr. Hart. How high do you
say they are?

A Well, I do not know I
tell you, I do not know,
I may be mistaken so far
and I should not like to
say. I have never been there.
I have never been on the
spot. I have never been
there to measure it

2 You have not idea?

A I have an idea certainly
Mr. Catlin. If you were
standing on a bluff on the
other side couldn't you

be as able to state the heights of them, as you would if you stood on the side of the river and saw the face of them? A Yes Sir, I would be more able to tell, that if I stood on the other side.

They are very prominent high bank, are they not.

A Yes Sir.

The Court. Those are the same hills we had opposite Negro Bar.

Mr. Catlin. Yes Sir, that is the trail reaches further back there - Well, you stated that 5 feet in some places and 25 in others, I want to get what would be a fair average?

A There is more 5 feet than 25.

Q. Well, what would be your best judgment as to the average depth?

A An average of 9 or 10 feet.

2. State whether there is
any mining carried on there
now or whether there has
been at any time during the
past 5 years? A Yes Sir

I state to what extent?
Just describe it?

A. There are two claims run-
ning -

I will describe the character
of the claims, go on

A Common Shute Claims, com-
mon Shute mining

2. Are these shutes in the
river? A Yes Sir

I what heads of water do
they use? A I would
like to see my notes

I you can refer to your mem-
oranda there

Mr Hart. Within the last
5 years what heads of water,
that is the question?

A { referring } 100 inches
now, but there is used only
a little - I will correct that
about the Shute mining. It
is drifting, not Shute mining

Q. This is drifting?

A. Yes sir. About 100 inches altogether and may two days in the week perhaps two days more or less.

Mr. Catlin. About 100 inches for how many days in the week? A. Well, sometimes one - whenever there is a pile to wash -

Q. They drift out a pile of dirt and then wash it?

A. Yes sir.

Q. State whether between Holston and Alder Creek Station there is any mining going on, or has been going on since you have been in the Employment of the Company and the Character -

A. There is a little mining above Woods Run, a very little. It has not stopped, it is worked with Chinamen.

Q. State whether there are any tunnels or not passing under the railroad or any deep cuts? A. There are 2

tunnels passing under the
railroad when Ryng's
claim is?

2 Describe the situation
of Ryng's claim?

Q There is one old claim
and one claim that is now
worked, there is one claim
that is not worked another
is one claim that is now
worked

2 Where is that Ryng's?

A Near Alder Creek.

2 Between Polson and Alder
Creek station? A Between
Polson and Willow Creek on
Alder Creek Hill.

2 What kind of claim is
that what kind of soil is
it in? A Gravel

2 White gravel, red gravel,
or blue gravel?

A Red gravel, and red soil
on top

2 This red gravel and soil?

A Yes sir

2 How deep is the workings
in these claims?

A Lyndge about 5 feet
 Q Where do the sluice dis-
 charge? A He discharges
 through his tunnel

Q This tunnel you say passed
 under the railroad? A Yes
 in a rock tunnel

Q State whether those tun-
 nels are plainly to be seen
 by any body passing up
 say on the railroad or by tra-
 velling the road? A One of
 them is plainly to be seen, the
 east one because it has fully
 in and there is a large hole
 and the tunnel is open for
 a short distance. The west
 one cannot be seen so much,
 but still can be seen in
 some places.

Q What is the extent of
 the ground worked in the
 Ryney claim? A It will
 be about 10 or 12 acres. He
 works two days in the week
 with water

Q What head does he use?

A 135 inches

2 Now slate about Penn-
sylvania Flat below Alder
Creek? A Pennsylvania
Flat there is about 30 acres?

2 What depth? A We
get the average of 40 feet
2. Fairly Flat state where
that is? A Fairly flat
is west of Pennsylvania
Flat opposite Taylor Bar.

2 And next below Penn-
sylvania Flat?

A Yes sir

2 State the extent of the
surface that has been washed
off there? A. There is
mined off 60 acres about

2. About what depth,
Fairly flat? A About
16 feet I believe, that is
the average, We took 20
places and averaged them.
We took it at twenty dif-
ferent places and made an
average

2 Make an average of
16 feet? A Yes sir

2 When did that tailing

to? A Dredge in the river, these also tailing out from these old mines

Mr Hart. Mines 20 or 30 years ago? I suppose so Mr Catlin State whether there was any mining on Forto Ben and Pennsylvanian flat since you have been there?

A year or there has been some mining

I know what extent

A Sometime the women start in and then quit again and use from 100 to 200 inches of water, whenever a claim ran they would use from 100 to 200 inches of water. At present there only are Chinamen working in the old claims.

I state about Willow Springs Hill diggings, have you made any examination of them so as to state the depth of the washes there and the extent of them?

A I have made no meas-

crements, now

Q Can you state from your knowledge of that about how deep they are?

A They are very deep, 40 or 50 feet some of them - from 30 to 60 feet

Q Where do the tailings of these diggings, Willow Spring diggings principally go ² in what canon or ravine or creek?

A The tailings most all stay in Willow Creek. Willow Creek is so formed that the tailings do not go away much

Q Where do they go, into some creek then? A Willow Creek, you see

Q Do the tailings stay in the Canon there?

A Yes sir mostly all, a great deal of them

Q Where do Chem. Prince's discharge ² A In the banks of Willow Creek

Q Now where does the sediment and muddy water

go? A The muddy water
goes through the creek into
the river

Q State what effect the
winter floods have on that
Creek? A It cleans it
out for a great deal

Q When does it clean it
to where does it go?

A At several places when
it is filled it cleans it

Q Where does it wash it?

A To the American River

Q State the extent if you
can in general away of the
accumulation in Willow Creek
of the tailings from these mining
claims that discharge their
tailings into that Creek,
about how deep is it filled
up? A I could not tell
because I have never seen
the original channel.

Q Can you form some idea
from the appearance of the
natural banks?

A No sir

Q Can you tell whether it is

Are feet or twenty feet deep?

A No sir, I could not be-
cause I could have to see
the first chance you go
before it was filled up

I will, state whether they
are covered, whether they
spread out and cover any
space or not?

A Oh a great space

I have you noticed the
effect of the winter floods
upon it? A Yes sir

I state the character of a
flood when there has been
a heavy rain; the character
of the flood in Willoughby?

A It will take away
some of these tailings and
deposit them further along
Callow Creek toward the
American River

I Is there a railroad
crossing that creek?

A Yes sir

I Have you ever noticed
the effect of a flood upon
the railroad bridge?

A Yes sir, a great many times

I State what effect it has?

A It endangers the bank and so far as I know it has taken it away once.

Q. Has that ever carried the bridge away while you were there?

A. Yes sir, once it took away one of the bents

I do not remember was that?

A I do not recollect, it was some years ago, within the past 5 years.

Q Now in regard to Alder Creek I will ask you whether you can tell anything about the extent of mining upon Alder Creek - State first whether that is a larger creek than Willow Creek or whether it is smaller?

A. Alder Creek from Prairie City to the mouth is a great deal larger than Willow Creek is and the mining has been con-

Considerable more there than any other of the creeks, the banks have been cut down and thrown into the creek and washed away.

Q Now state what effect the winter floods have on the deposits in Alsea Creek?

A Well, it took a great deal of the tailing away, and other came in the summer in place of it, and if a flood comes it will take part of the tailing away.

Q I did not ask you what occurred after the flood but I asked you what effect the flood upon them? A It will take a great part of the tailing away.

Q Then you say others come in their place, where do they come from?

A From the banks and from the tailings that are laying on both sides of the creek.

2 From mining?

A Certainly, from the tailings, yes

2. What a whether the grade of Alder Creek, is more rapid than Willow Creek?

A At some places Willow Creek is far more rapid

I Well, how is it generally with regard to Alder Creek as to its discharge into the river, whether the tailings remain there or whether they are discharged annually by the floods more or less into the American River?

A More or less they go into the American river, certainly

2 Taking the banks of Alder Creek where you can see them can you form any idea about the depth?

A It varies so much where there is hole

I Well, take it at the crossing of the Railroad bridge. A I do not know how high that is.

I state the character of the banks? A Gravel

2. Well, as to whether they are flat, low or bluffs banks?

A Mostly Bluff

I Now I will ask you if you know anything about the old reservoirs that have been used there for holding water?

A I know some near Alder Creek

2. In the vicinity of Alder Creek and Folsom. Reservoirs of water. I am inquiring about now, that are supplied by the Natoma Canal?

A Yes Sir I know some

I state the largest ones that you know, that have gone out of use and have been put to other use?

A We have had one dried and cut the bank down last winter, that was 18 acres, and we are plowing it now

2 For what purpose?

Q To make a vineyard
 2 What is the character of
 the deposit there?

A The deposit is brought by
 the drilet by the second water

2 What is second water?

A That has been used for
 mining once.

2 It has been used for
 mining once, what effect
 has that upon it?

A To put more solid matter
 in it

2 Does it make it very
 muddy or not? A It will
 depend on what soil it has
 washed.

2 Well, I am taking the or-
 dinary soil that is washed by that
 water which you say was called second
 water and carried into the reservoir,
 was that clear or muddy water?

A Muddy water

2 To what extent is it muddy?

A I don't know how many per cent
 of mud and water there is in it

2 What color is it?

A Gray, yellow

Q Well which one do you call it gray or yellow?

A Gray

Q Does that red soil produce a red color in the water? Some do and some not

Q I understand you that the soil that was deposited by this water that you call, or has been used and therefore is called second water that has been deposited in this reservoir, what is the color of that deposit?

A Yellow and gray

Q Yellow and gray?

A Yes sir I do not know what you might call it

Mr. Carline I did not expect to call this witness to-day and the specimens that he has brought down are in my office and I ask the privilege of recalling him when the specimens are brought here. I will just ask some general

questions - how deep is that deposit in the reservoir of 18 acres which you are now ploughing up for the purpose of planting a vineyard
 A It is on the bank on the end of the reservoir 5 feet

Q At the end of the reservoir?
 A Yes sir

Q What do you mean by the end of the reservoir?

A Where the bank was, at the deepest place

Q Did it have but one bank?
 A Yes sir, one bank one bank and the ditch made the other bank

Q How was the water kept in on the other side?

A By a hill

Q The natural formation?

A Yes sir

Q Out say in the middle what depth would it average the 18 acres? About five feet at the end? Yes.

Q About what depth

would it average right through?

A It is 800 feet long I believe and begins from nothing and runs up to 5 feet, you can figure it out quick enough.

Q Well what is the appearance of that sediment; what does it look like? A It is a sort of yellow sediment

Q Well has it no characteristics about it except color you have stated the color - now I am asking you to describe it in some other way? A It is generally clayey, sticky clay

Q It is how as to being fine or coarse? A It is very fine

Q I was desiring you to answer without my asking you. You say it is very fine? Yes

Q Do you know what is usually termed slickens? Do you know the character

of the deposit which has been frequently spoken of here as being pluckens?

A I have seen them in the American river at Alder Creek; that is all I know about it

Q Well is it like that?

Ans sir

Q In what respect does it differ? A Because it is pediment, it is good ground. It is the best substance of the soil that is retained there

Q You say it is very fine material? A Yes sir

Q What is its component? What kind of soil, what parts of the soil is it composed of? A I could not tell. It is clay I should call it

Q Is there any sand in it? A Yes sir

Q Clay and sand?

A Yes sir there is clay and sand

Q What you call sediment?

A Yes sir sediment is the name that we use for it

Q It is generally called sediment is it? A Yes sir

Q Now state if you know of any other cultivation of deposits from the mines there of a lighter character or a different character from this?

A At Wards' Ravine there used to be a reservoir. The bank is still there. That is the reason that they can see that it has been a reservoir. I do not know myself that there was one but that is the reason I know it has been a reservoir.

Q Well what about it?

A That is sediment too

Q Well what cultivation I ask you? A That is a grass field

Q How long has that been cultivated? A That was cultivated when I came here.

Q A grass field?

Answer, a hay field
 What kind of grass?

A Common grass

Q Alfalfa? A No sir

Q Will state whether there was any place there where there was any orchard planted on this? A There was when I came here there was a piece of 40 acres South of the present plum orchard, where our plum orchard is; that was a very wet piece with holes in it and then there was a mine running at Willow Hill and we run the tailings in there and filled the holes up and to make the ground higher and the sediment and tailings we run in there till three years ago and then it was left for a year and then it was cultivated and we planted an orchard in it

Q Was it dis charged

from the mine immediately directly on this land?

A Yes sir

Wittart Discharged from what mine? A The Natoma mine, the Natoma Co runs a mine there then

McLeathin How high was the bank where that washing was done, this mining that was carried on to this 40 acres? A How high is the bank?

A Yes sir A I do not know

Q Well is it 1 foot high or 10, or 20, or 50?

A I guess it is about 30

Q What was the character of the bank as compared say with Chris Dawson's claim? A About the same thing except the soil is deeper, more soil on the surface

Q A great deal like the claim of Chris Dawson's only on the soil is deeper?

Ayes si it is deeper

Q How much of a bank was washed there — how long and how deep?

A I do not know because they mined it 10 years and I cannot see the old place where they began

Q What is that? A They mined it 10 years — long before I came there

Q You cannot see where?

A I cannot see where the slope of the hill is, where they mined it out. I could not see that. I could not make an estimate of it whatever.

Q Well I will ask you if that or chard was planted there grows well or otherwise

A No it is too frosty. It is too low. It don't do very well, it is too low

Q It is too low? Ayes si

Q How high was the soil raised there. You say it filled up the low places

and raised the soil?

Arjes si.

Q How high was it raised?

A I suppose about 3 or 4 feet

Q What kind of trees are planted on it?

A Apricots and peaches

Q Well you say they don't do well? Or will they suffer a great deal with the frost?

Q Suffer by what?

A With the frost

Q Well leaving out the frost question how do they do?

Miltart Well they don't do well. I suppose that is all. That there is of it

Mr. Ashin Q Do you say it suffers from frost because the place was low?

Arjes si; there is no draught and the frost hangs right there

Q Do they always suffer from frost? A It will always suffer from frost

because the place is where
the frost always catches

Q How do the trees themselves grow? A The trees grow splendid that line, the plum trees, all the plum trees do fine, the peach and apricot not so well. The plum trees in there do well but the peach and apricots are not so strong against frost and they don't do so well against frost

Q How does the frost affect them? A It kills several of them

Q By killing the whole trees or the blossoms

A The whole trees sometimes, but mostly always the blossoms two years now the blossoms for two years the blossoms

Q For two years it has killed the blossoms?

A Yes sir. However that has nothing to do with the soil at all. It is simply

a thing that pertains to the trees

Q What I want to know of you is whether the trees grow there thriftily or well or not? A Yes sir except that alone, they do well except for frost, if it was a little higher, if there was more draught the trees would do well

Q What do you mean by more draft? A Where there is no draught the frost hangs

A more draft of what?
A more wind

Cross Examination of Albert Stalen

Witness Q When was the most mining done at Lawson's claim? A I suppose the most was done before I came there

Q How long ago was that?

A 4 or 5 years ago

Q They have been mining that claim out in small quantities and by degrees since 1850 haven't they?

A I do not know anything about it. I was not there

Q The greater portion of it had been mined out when you went there? Alf is his

Melottin He did not say since 1850 — Did you say it was mined in 1850?

A I say I do not know anything about it. I said I did not know if it was mined in 1850

Melottin When was the most of the mining done at Red banks? A Before I came there

Q Very little has been done since? A Very little is

Q And the sand that had been washed out, sand gravel and dirt had all been washed out

down the river? Ayes sir
 partly except a little which
 has been washed down since

Q I mean all that had
 been washed down before
 that had been ^{washed} down the
 river? A It had washed
 down ⁱⁿ the river

Q And down the river too.
 Ayes sir I believe so.

Q McDonnell Hill Claim,
 nearly all of that had been
 washed when you went there?
 Ayes sir

Q And the buildings had
 been washed away down the
 river? Ayes sir

Q Now you would say
 that of all the balance of
 these claims wouldn't you?
 Ayes sir

Q Have you noticed whether
 or not after the buildings had
 been put in there each
 year the flood comes
 and washes them away and
 the river fills up again
 and it washes away?

A The river does not come in the tailings, the river does not go in these mines

Q Well creeks? A well the creeks do in some parts

A well the creeks just clean them out in the winter and then they fill them up again in the summer? And they do not clean out totally

Q They do not clean out totally but largely? A yes

Q Have you noticed whether or not the water coming down past Folsom contains a great deal of sand? A yes sir I have noticed that.

Q It contains a very great deal? A yes sir

Q How far up the river have you noticed this sand coming down?

A I have seen sand in the rivers certainly

Q Coming down every year? A yes sir

Q Large quantities?

A The water in the river is always sandy

Q How long has it been sandy that way? A I have never seen it clean

Q It contains both sand and sediment does it?

A I should not like to say so because I do not know I do not know whether it contains sediment

Q What is this stuff that settles in your reservoir?

A Oh that is mixed. That comes from a short distance

Q That comes from right above Folsom? A Yes sir

Q It comes from the top air? A Yes sir

Q Nice soil on top and when it is deposited in your reservoirs you use it for agricultural purposes?

A Yes sir

Q But you do not use this sand that comes there?

Ans. 21.

Q Did you ever try to plant an orchard down in the bottom of the river there in that sand or along any of those bottom lands? A I never did try.

Q Do you think an orchard would grow there from your experience? A I do not think it would.

Q Did you ever see anything growing in the sand that comes from the mines above?

A Nothing but willows and grass.

Q What kind of grass?

A I don't know the exact name of it.

Q Alkali grass? A A sort of grass you know.

Q I want to know whether or not a heavier material like sand does not settle in your ditch before the water reaches your reservoir.

A This water that we make the reservoir with is mostly

second water, after having been used once

Q You have a sand box to catch the sand to some extent? A Yes sir

Q Do that the sand never gets into your reservoir?

A A great deal of sand comes in

Q But a larger proportion of the lighter material that don't settle goes in there too does it not? A Yes

Q More of that than of sand? A I do not know the precise quantity of each

Q How often have you noticed in Willow Creek the operation of water there washing out the sand and then again filling up? A Within the last

3 years particularly I have noticed it because it took away 10 or 20 acres of our land, the current changed and took away

Some of our land and that made me study the matter better than any other and try to find a help for it.

Q You noticed then that during the last two years the effect of the raising of the water was to carry these tailings out? A To a certain point yes sir

Q To what point do they carry them? A To a little above the railroad bridge where there is an elbow

Q Then does it not carry it into the river?

A Partly

Q A slight portion?

A Oh. I suppose a great deal but there is an elbow above the railroad bridge and there it stops: there is no fall

Q Is there a heavy current there? A At some places and at other places not

Q Does it carry the rocks as well as the sand with it?

Ayes sir

Q And it also carries sand every year too, and rocks and cobbles? A I have seen stones moved of a cubic yard in that creek

Q That creek is not as steep as the river is it? Not as swift as the river? Ayes sir I think it is as swift as the river

Q Is it as swift as the river above Folsom? Ayes sir

Q Did you ever see large cobbles coming down from above Folsom in the river?

A I do not think I have seen it no.

Q You could not see them when they came could you?

A No I don't think I could.

Q When you went there 5 years ago you say more mining had been done there than has been done since Ayes

Q How much more 5 times as much, the whole country up around Folsom the mines

that you speak of?

A Five times as much as there is since I have been here?

O Yes sir

A I think about 500 times as much - that is to give you an idea. I do not think there is 500 times as much but very much more

Q Was the mine filled up then like it is now up there? A Yes sir I do not believe there would be much difference in it

Q How much difference do you think there is?

A I could not tell

Q Did you ever take any measurements to see?

Ans sir

Q You do not know whether it is filled up ^{or 6 feet} ~~much~~ or not?

Ans sir I could not say. At some places I might say and at other places I could not.

Q How say your trees did not grow well? A Some did not

Q What was the difference between this sediment you speak of and slickens

A If you call slickens what there is at the mouth of Alder Creek and out in the Sacramento river I will know. But I do not know what you call slickens in Sacramento — is it sand and cobbles?

Q Slickens at the mouth of Alder Creek do you say?

A Well the difference between the sediment and that sand is that one is sand and the other has all the substance for growing vegetation

Mr. Catlin Q You say that material in Alder Creek is sand at the mouth of ~~the~~ river? A I say that substance at the mouth of Alder Creek is slickens

at the mouth of Alder Creek
sand and cobbles.

My ^{last} Q Wouldn't you mine
in the slickens at the
mouth of Alder Creek?

Ans, not very much,
my horse will go in per-
haps here and there but
not very much. He would
not mine in it

Q Then it is not slickens?

Ans I do not know
what slickens is.

Q If you do not know
what slickens is I shall
not examine you about
it

— " —

< Recess until Monday
morning December 19th at
9.30. Am. >



